UNIVERSITY OF LIVERPOOL

Division of Clinical Psychology

Hope, Flow, Mindfulness and Subjective Well-being: A study of relationships

By Dr Kate Marks

13th September 2013

Supervisors: Dr Joanne Dickson and Dr Jen Unwin

A thesis submitted in partial fulfilment of the requirements for the degree of

Doctorate in Clinical Psychology at the University of Liverpool

Acknowledgements

First and foremost, I am deeply grateful for the support and guidance of my supervisors: Dr Joanne Dickson and Dr Jen Unwin. Without their trust and honesty, this piece of work would not have been completed.

I am indebted to the staff and students at the university that took part I the study: without their time and effort, this study would not exist.

Lastly, a thank you to my family (Mum, Dad, Anna, Lorraine, Geraldine. Patrick, Oliver and Alex) and my friends, who have all been a great source of support and, at times much needed, distraction.

Table of contents

List of Tables

List of Figures

List of Appendices

Word count: 22, 069

INTRODUCTORY CHAPTER: THESIS OVERVIEW

The first chapter is a narrative literature review in which key constructs relevant to this thesis are introduced, relevant literature is summarised and critiqued, and areas for future research are identified. Subjective well-being (SWB) is defined and hope (both goal-focused hope and spiritual hope) is identified as important to SWB. It is suggested that two concepts that may help explain the relationship between goal-focused hope and spiritual hope and SWB are flow and mindfulness, which are each examined. It is highlighted that goals are important to both goal-focused hope and flow, and that spirituality is important to both spiritual hope and mindfulness. Based on the literature reviewed, theoretically based hypotheses are proposed.

The second chapter is an empirical paper, the intention of which is to build upon the literature review by examining the theoretically derived hypotheses proposed within the review. The aim of the study is to examine the relationships between goal-focused hope, spiritual hope, flow, mindfulness, and SWB, and to explore mechanisms through which hope may affect SWB. The main study variables are examined using a university sample and an online study.

The last chapter of the thesis is the concluding section, which has three main sections. This first section is a general overview of the work done, followed by an expanded discussion of possible explanations and interpretations, methodological considerations, and clinical implications. Section two presents a lay summary of the study for dissemination. The summary is presented in a form suitable for publication in a university magazine, with a target audience of university staff and students. The aim of the final section is to explore areas for future research. References are provided at the end of each chapter and appendices are at the end of the thesis.

CHAPTER 1: LITERATURE REVIEW

Hope and Hope Mechanisms in Relation to Subjective Well-being

1.1 Overview

The purpose of this literature review was to gather together and summarise the body of relevant available research and literature on subjective well-being (SWB). The aim was to provide the reader with a comprehensive background for understanding current knowledge, and to identify gaps within the literature and potential areas for future research.

It is important to understand what psychological factors may underlie SWB in order to inform interventions and utilise areas of resilience. The review begins by defining SWB and exploring its importance, paying attention to the wider political context. The measurement of SWB and what psychological factors may influence it are then discussed, making reference to key research and theory throughout. With a focus on psychological constructs that affect SWB, hope, flow, and mindfulness, are identified as factors of interest, which are then taken in turn and examined. Theoretical hypotheses are then proposed based upon the literature examined.

1.1.1 Review Methodology

Subjective well-being is a broad topic with a large amount of literature and empirical studies available. Since this review aimed to discuss subjective well-being and key psychological factors that may be related to it, it was felt this could be achieved most effectively with a narrative review, as opposed to a more narrow systematic review. However, a systematic method was employed to search for relevant literature to ensure the search was thorough.

Firstly, the following databases were searched: DISCOVER, PsychINFO, Web of Knowledge, and Scopus. The initial search terms entered were 'subjective well-being' and 'hope'. It was clear that there were three components to subjective well-being (positive affect, negative affect and life satisfaction see section 1.2). These terms were entered individually, followed by 'subjective well-being/ positive affect/ negative affect/ life satisfaction AND hope'. Two types of hope were identified and searched for: 'goal-focused hope' and 'spiritual hope'. The literature identified internal psychological factors as important to SWB and flow and mindfulness as constructs that may contribute to the relationship between goal-focused hope and spiritual hope, and SWB. Given this, 'flow', 'flow AND subjective well-being/ positive affect/ negative affect/ life satisfaction', 'mindfulness', and 'mindfulness AND subjective well-being/ positive affect/ negative affect/ life satisfaction' were entered as search terms. The search items were then further refined based on themes and questions identified within the literature: 'flow AND goals', 'mindfulness AND spirituality', 'goal-focused hope AND flow' and 'spiritual hope AND mindfulness' were the final search terms entered.

The initial search terms yielded a huge amount of literature, so key authors were identified and titles and key words were scanned to establish relevance, after which the abstracts were read if deemed relevant. When search terms yielded results sufficiently narrow to enable review of the abstracts, this was done. If the abstracts indicated that the papers were relevant, the articles were obtained and examined. A timeframe of twenty years was applied to the search criteria, with what were considered influential works and theories an exception to this timeframe. Further literature was obtained from the reference sections of articles uncovered using the search terms.

1.2 Subjective Well-being (SWB)

Dodge (1930) stated that theories around happiness had not progressed further than those stated by Greek Philosophers (cited in a review by Wilson, 1967). In his review Wilson concluded that a happy person was a man or woman who was "… young, healthy, well-educated, well-paid, extraverted, optimistic, worry-free, religious, married, with high self-esteem, job morale, modest aspirations and a wide range of intelligence" (pp. 294). However, such definitions made no attempt to examine what components SWB may encompass, such as whether SWB had both affective and cognitive components.

Since Wilson's review, research has indicated that SWB has multiple components. Specifically, it has more recently been defined as a concept that includes a person's affective evaluations (e.g. "I feel happy") and cognitive evaluations (e.g. "My life is as I want it to be") of their life, which is also termed their satisfaction with life (Diener, Lucas & Oishi, 2002). Summarising subjective well-being, Diener (2012) stated it was a person's thoughts and feelings as to whether they are leading a rewarding life.

The affective component of SWB includes positive and negative affect, which have been found to be clearly separable and not the inverse of each other (Diener, Smith & Fujita, 1995). In a comprehensive review, Diener, Suh, Lucas and Smith (1999) recommended that studies looking at SWB should include measures of both positive and negative affect. The cognitive evaluation of life satisfaction has been found to form a separate factor from the two types of affect (e.g. Andrews & Withey, 1976). Variables have been found to differentially relate to each of these components of SWB (positive affect, negative affect and life satisfaction) (e.g. Diener et al., 1995). In a meta-analysis of eight studies measuring SWB with samples of 259 to 1571, Stones and Kozma (1985) stated that, although they found a single-factor solution for SWB, this factor was composed of diverse attributes (i.e. positive affect, negative affect and cognition).

In summary, the research suggests that SWB is a broad construct that includes emotional responses and cognitive evaluations of satisfaction with life.

1.2.1 The Importance of SWB

There is increasing evidence for the importance of SWB (Sheldon & Lyubomirsky, 2004). For example, SWB has been found to be a protective factor for older adults against the onset of disability (Ostir, Markides, Black & Goodwin, 2000). Conversely, low SWB has been linked with depression and a greater likelihood of suicide (Keyes & Magyar-Mow, 2003). Leaders in the field of affect are Watson and Clark who have defined negative and positive affect. They described positive affect as a general dimension of subjective distress that subsumes a variety of aversive mood states, as such has been found to be related to negative feelings, such as sadness and fear (Watson & Clark, 1984); and they defined positive affect as a characteristic that describes the experience of positive emotions, which has been related to emotions including happiness and joy (Watson, Clark & Telegen, 1988).

Research indicates that SWB is important economically. Oishi (2012) conducted a large meta-analysis and found that workers who rated themselves as happy were more productive in their roles and had more success in the work place. In a brief review of relevant literature, Diener (2012) concluded that research demonstrated compelling findings that SWB enhances productivity and that job satisfaction leads to better performance, which benefits society as a whole. Similarly, there is evidence that SWB leads to desirable and pro-social behaviours that are of benefit to society. For example, in a German survey study of 16, 963 adults Priller and Schupp (2011) found that after controlling for other variables, those who reported they were ‘happy’ in the last month were more likely to give money to charity and donate blood.

An individual’s general health is likely to affect their performance and functionality in all areas of their life and so protecting physical health is individually, socially and

economically important. Associations have been found between SWB and general health. In a meta-analysis, Okun, Stock, Haring and Witter (1984) found that increased SWB was associated with more positive self-ratings of general health. Diener (2008) reviewed longitudinal studies and found that measures of SWB (e.g. positive affect) were predictors of long-term health status. There is also evidence that interventions that enhance SWB benefit the physical body, for example, studies have shown that relaxation training increases positive affect and as a consequence reduces blood pressure, with obvious benefits to physical health (Diener & Chan, 1984). Diener (2008) found that one of the most important things a doctor can do during an examination in order to predict physical health is to explore the patient's SWB, with lower SWB signalling higher risk of later health difficulties. Further, he found that those with higher positive affect had lower rates of many health problems, including heart disease, mental health issues and drug dependency. Diener and Chan (2011) stated that the evidence that high SWB benefits physical health is clear.

Burns, Anstey and Windsor (2011) discuss the tripartite model of depression and anxiety, which hypothesizes that depression is characterised by low positive affect, whilst high negative affect characterises both depression and anxiety. They reported that positive affect was more strongly associated with depression than anxiety, whilst negative affect showed comparable associations with both depression and anxiety. They stated their results provided support for investigating positive and negative affect separately since they are differentially related to mental health outcomes. However, due to the epidemiological study design with data collected every four years, the authors stated such associations may not reflect associations over longer periods of time. Models such as this illustrate the importance of SWB to mental health, including depression and anxiety.

The available empirical evidence consistently reports negative associations between positive affect and poor outcomes, with positive associations between negative affect and

poor outcomes (e.g. Keyes & Magyar-Mow, 2003; Watson et al., 1988). Based on such evidence interventions are increasingly being designed to move beyond the alleviation of suffering and reduction of symptoms, to increasing SWB (Diener et al., 2002). Within a changing National Health Service (NHS) and societal understanding of what it means to be 'well', psychosocial interventions aim beyond the mere removal of suffering, to the enhancement of SWB.

There are limitations within the field of SWB research. Firstly, measurement of SWB has often lost clinical specificity due to the use of singular and composite measures as opposed to measuring each of the three components of SWB individually (discussed further in section 1.2.2). Further, there is a clear lack of longitudinal research, which would allow the exploration of the temporal relationships between components of SWB and other constructs and factors of interest (as discussed within Diener et al., 2012). Importantly, there is a lack of understanding regarding the mechanisms of action that underpins SWB, for example hope is known to be associated to SWB but it not understood how it is associated. Given the importance of SWB to protect and enhance quality of life, physical health, and mental health, an understanding of how a person's own appraisal of their well-being is enhanced, through understanding the processes that underlie it, is important and clinically relevant.

Increasingly, it is recognised that economic measures alone do not fully reflect a nation's well-being. In recent years there has been the emergence of the narrative that a 'good' society (i.e. a productive society) is a happy society (e.g. the Action for Happiness Campaign, co-founded by Lord Layard). Based on the SWB research and literature the UK (United Kingdom) government is increasingly aware that to enhance their nations SWB is to enhance their productivity and reduce pressure on the government. Sickness absence has been cited as a major public health and economic problem costing the UK government billions, resulting in the government stating that the reduction of work sickness is a top priority (e.g.

Jones, Huxtable, Hodgson, & Price, 2003). The research demonstrates that enhancing SWB has physical health benefits (e.g. Diener & Chan, 2011) and so increasing societal SWB is likely to reduce both sickness rates and the burden on an already stretched NHS service. Further, depression and anxiety have been found to be one of the biggest causes of long term sickness in the UK and rates of depression and anxiety are increasing (Henderson, Glozier, & Elliott, 2005). SWB has been found to be protective against mental health issues such as low mood (e.g. Burns, Anstey & Windsor, 2011). Therefore, if the government enhanced SWB in society rates of depression would reduce, thus ensuring more members of society are working and fewer are accessing the benefit system (e.g. unemployment and incapacity benefit).

The awareness that social indicators alone do not define quality of life, and the need to understand and explore the nation's SWB in order to enhance it, has led the government towards a more subjective assessment of the quality of life of the individuals within our society. The goal of such assessments is to provide policy makers with unique information that can assess the impact of policies and help to develop policies to enhance the population's SWB (e.g. Fujiwara & Campbell, 2011).

Based on these developments in April 2011 the Office for National Statistics in the United Kingdom (UK) introduced four SWB questions on the householder's survey. These were "Overall, how satisfied are you with your life nowadays?", "Overall, to what extent do you feel things you do in your life are worthwhile?", "Overall, how happy did you feel yesterday?", and "Overall, how anxious did you feel yesterday?". These items were rated on a 0-10 Likert scale with higher scores indicating higher SWB. Key results included a small difference between men and women (females scoring slightly higher on the SWB items), younger and older adults generally scoring higher than those of middle age, and those of middle age reporting higher anxiety than younger and older populations. The current four

items are considered exploratory and may be developed based on feedback and the results of analyses, for example predictive validity analysis may suggest the need for more specificity.

Notwithstanding that the four items currently being used may be considered basic and may not capture the broadness of SWB as discussed thus far, that such questions are included at all demonstrates the recognition of the importance of SWB at a government and policy-making level. If research is able to facilitate understanding of what factors are important to SWB, then this may impact upon national policy.

1.2.2 The Measurement of SWB

As the importance of SWB has been established, attention must be given to the measurement of SWB and how this broad construct can be adequately assessed. The area of SWB measurement has its roots in survey research, with the most common assessment of SWB being the single occasion self-report questionnaire, with the known limitations of self-report measures (Diener, 2012). It is a limitation in the field that no other measurement methodologies have been used to assess SWB (e.g. observations along with self-report measures). However, Diener et al. (1999) stated that self-report measures of SWB have been shown to have moderate convergence with both daily mood reports and informant reports of SWB. Indeed, as SWB is an internal and subjective phenomenon, it may be that self-report is the only way to measure it.

As mentioned in 1.2.1, a limitation of SWB research and measurement has been the attempt to measure SWB using a generic 'happiness scale'. That is a single measure attempting to measure the individual's general happiness, yielding a single score. However, as discussed there are multiple components of SWB (positive affect, negative affect, and life satisfaction), which have potentially different relationships with constructs that are clinically

meaningful. For example, research has shown that negative affect and positive affect have different roles within anxiety and low mood (Burns, Anstey & Windsor, 2011).

Researchers wanting to fully capture SWB have measured positive affect, negative affect, and life satisfaction separately. However, a further complication and difficulty within the empirical study of SWB is although measured separately, during analyses these measures have sometimes been calculated to create a single composite score. For example, a calculation used initially by Diener et al. (2002) is to use the Positive and Negative Affect Scale (PANAS: Watson et al., 1988) to capture the affective component and the Satisfaction with Life Scale (SWLS: Pavot & Diener, 1993) to measure life satisfaction and the cognitive component of SWB. A composite score is then calculated (positive affect minus negative affect, plus life satisfaction). Although using such a composite measure may provide ease in relation to analyses (e.g. as an outcome variable in regression analyses), and studies such as Stones and Kozma (1985) suggest a single factor can capture SWB, a limitation of using such a composite measure is similar to that of a unitary 'happiness' measure: lack of specificity. The consequence of using a composite measure is that specific relationships between the components of SWB with other constructs cannot be examined. Further, as positive affect and negative affect are not the inverse of each other (i.e. someone can be high or low on both positive affect and negative affect), looking at both types of affect separately is likely to provide more clinically meaningful outcomes.

Based on the above limitations Diener et al. (2002) recommended that each component of SWB should be measured separately wherever possible, rather than attempting to use a unitary or composite measurement. A criticism of using such unitary measures is lack of specificity by attempting to reduce the broad and multi-faceted phenomenon of SWB into a single score. For example, it may be that the cognitive and affective components of SWB have different relationships with different constructs, which would be lost should a single

measure be used. Therefore, it seems the most thorough way of measuring SWB is to measure positive affect, negative affect and life satisfaction separately wherever possible, rather than a composite or unitary score, which lacks specificity.

1.2.3 Demographic and Psychological Factors that Affect SWB

Given the importance of SWB, it is of value to know and understand what may influence it. Many factors may impact upon SWB and it is beyond the scope of this review to examine them all. This review examines key demographic factors (age and gender) and internal psychological factors (hope, mindfulness and flow). The rationale for focusing on these psychological factors was to focus on those beliefs and experiences that are likely to make life more enjoyable and so enhance SWB. There is much literature regarding the associations between hope, flow, and mindfulness, and SWB. This warranted the review of literature relating to these psychological factors and SWB, to provide a more coherent theoretical understanding of the available literature. Further, as the mechanism of action from hope to SWB is not fully understood, a further theoretical reason for reviewing flow and mindfulness was as it was thought they may be experiences that help explain the relationship between hope and SWB. The demographic and psychological factors identified are now taken in turn and examined.

In a review of SWB literature Wilson (1967) stated that youth was a consistent predictor of SWB. However, more recent research demonstrates that although there may be a slight decline in life satisfaction as we get older, this is often lost when other variables (e.g. personal support) are controlled for (Siedleki, Salthouse, Oishi & Jeswani 2013). Inglehart (1990) felt that current social conditions may lead to younger people endorsing more positive affect. This suggests that results demonstrating that younger people have elevated SWB may actually reflect a cohort reporting bias rather than an actual difference in SWB. The extended lifespan, enhancement of quality of life, and the reduction of health issues now faced by older

adults, may also have affected the relationship between age and SWB. In contrast to Wilson, current research demonstrates that life satisfaction can actually increase with age (e.g. Herzog & Rogers, 1981). Diener and Suh (1998) measured components of SWB in a large international sample of adults. They reported that only positive affect declined with age, with satisfaction increasing and negative affect remaining stable with age. In a more recent study using a university sample Unwin and Dickson (2010) found a negative correlation between age and negative affect and no association between age and positive affect or life satisfaction, such results counter Wilson's (1967) suggestion that youth was a consistent predictor of increased SWB.

Though the findings on the relationship between age and SWB are not uniform, it seems age is something that should be controlled for in relation to SWB and is consistently referred to throughout the literature. However, the relationship does not appear to be a clear one. The research has moved from associating youth with elevated SWB, to recognising that the relationship is not that simple, and that increasing age appears to have a different relationship with different facets of SWB. Researchers looking at predictors of SWB should control for age where possible.

The literature in relation to gender and SWB is also mixed, with a variety of studies reporting relationships in either direction (i.e. that women score higher on measures of SWB than men, and that men score higher than women; Tesch-Romer, Motel-Klingebiel & Tomasikm, 2007). Diener et al. (1999) suggest that the literature generally demonstrates that men and women are roughly equal on measures of SWB. However, this seems at odds with the fact that within the general population depression is more prevalent in women than men (e.g. Beekman, Copeland & Prince, 1999). Fujita, Diener, and Sandvik (1991) suggested that it may be the *pattern* of affect that is different for men and women, as opposed to differences in SWB. They suggested that women are more likely to report greater levels of both negative

and positive affect than men, which may be due to socially prescribed gender roles that encourage women to experience and express emotions more than men. They suggested this gender difference in reporting styles may affect the relationship seen between gender and SWB in empirical studies. It seems plausible that such a difference may also contribute to gender differences in prevalence rates of depression. As with age, the relationship between gender and SWB is a complicated one, with a range of outcomes and theories present within the literature. However, gender is consistently referred to throughout the literature and so should also be controlled for.

The biggest shift in SWB research over the last 40 years is from identifying what external factors are needed to enhance components of SWB (e.g. job, finances), to what internal psychological factors may be needed (e.g. personality traits, dispositions). Research had focused on attempting to identify external, bottom-up factors that are associated with SWB. This was based on the precept that if the environment allows us to meet our basic and universal human needs, we will have higher SWB. The focus has now moved to top-down, internal psychological factors and processes within the individual that may influence SWB, based on the assumption that it is our internal and psychological world that creates the context from which SWB emerges.

Diener (2012) identified a range of internal factors that are related to SWB including mastery, trust, and personality. He found these internal factors predicted SWB cross-culturally. However, other internal predictors of SWB have been found to vary across cultures dependent on characteristics valued by that culture, for example, self-esteem is a stronger predictor of SWB in individualistic cultures than in collective cultures (Diener & Diener, 1995). This raises interesting questions regarding what may be universal predictors of SWB across different cultures.

Research on dispositions and personality traits have tended to provide more stable associations with SWB, with personality being a strong and consistent predictor of SWB within the literature. For example, Wilson (1967) stated that a happy person is one who is extraverted, optimistic and worry-free. Similarly, over thirty years later, Diener et al. (1999) reviewed the literature and concluded that extraversion and optimism were associated with SWB. Personality traits appear to provide some of the strongest associations with SWB within the current research base.

Research on personality and SWB provides support for a focus on internal psychological factors of SWB. Further, Diener et al. (1999) stated that the amount of variability within a person's SWB is itself stable, regardless of environmental factors. This suggests internal processes and experiences determine SWB, otherwise, one would expect unpredictable changes in SWB in accordance with the unpredictability of life.

In order to identify factors that are predictive of SWB research should be investigating processes that may underlie an individual's SWB. Rather than identifying psychological factors that are simply associated with SWB, researchers should seek to examine what psychological factors are related to SWB, and then attempt to understand the processes that underlie this relationship. This would provide a more comprehensive understanding of how SWB is developed, and crucially, how SWB is maintained and increased.

There are many internal psychological factors and processes that have been associated with SWB. However, it was beyond the scope of this review to consider them all. Psychological factors thought to be relevant to SWB have been drawn from the area of positive psychology. Hope has been selected as it has long been associated with SWB and recent research has allowed for more specificity regarding types of hope and their relationship with SWB, hence the need for an updated review. Within the area of positive

psychology, flow (see section 1.4) has been described as an optimal human experience that increases pleasure in life and increases SWB. Mindfulness (see section 1.5) has been associated with SWB and positive clinical outcomes and is considered a positive human experience that enhances resilience. Further, it was thought that the experiences of flow and mindfulness may shed light on the relationship between hope and SWB. Each will now be discussed and their relationship with SWB explored.

1.3 Hope

A cognitive concept considered to underlie SWB is hope. Hope has been broadly defined as the cognitive process of positive future thinking and social science research consistently reveals hope to be an important factor in the human change process (e.g. Snyder, 2002). In a review of common therapeutic factors, hope was considered an important therapeutic mechanism and a factor that accounts for a large amount of client change regardless of therapeutic approach (Hubble, Duncan, & Miller, 1999). A recent study found that with a sample of 172 people with serious mental health issues hope was a strong predictor of SWB (Werner, 2012). In a small study, Larsen and Stege (2010) analysed recordings of therapy sessions and found that explicitly and implicitly addressing and utilising hope in therapy enhanced the therapeutic relationship, highlighted client resilience, and facilitated change. Four out of the five therapists whose clinical sessions were listened to explicitly employed the concept of hope. Hope has been identified as important by the spiritually minded as well as atheistic philosophers and scientists (Scioli, Ricci, Nyugen & Scioli, 2011).

Though hope is considered to be important to SWB and positive clinical outcomes, researchers and clinicians continue to struggle with defining and measuring hope. A consequence of this has been difficulty in reliably ameliorating hope and understanding its relationship with positive outcomes, such as SWB. There is a paucity of information on

which to base interventions to utilise hope. For example, whilst research provides evidence for the importance of hope, little research has examined the processes and experiences hope may be part of and may give rise to. It would clearly be useful for clinicians to better understand hope, including variation in the types of hope people may hold and the experiences hope can give rise to. Such information could be used to inform theory and practice. More recently, research has identified two types of hope: goal-focused hope and spiritual hope, which will now be examined.

1.3.1 Goal-focused Hope

Diener and Chan (1984) stated that the type and structure of goals potentially affects life satisfaction and that goals are an important reference standard for the affect system. The existence of goals has been found to be important to SWB (Kasser & Ryan, 1996), as has the act of striving to pursue goals (Sheldon & Cooper, 2008). One ways goals may be important to SWB is via creating hope in achieving those goals. Snyder et al. (1991) conceptualized hope as a person's ability to perceive the pathways to these desired goals, and their sense of mastery/ agency/ effectiveness in being able to take the steps needed to achieve their goals. This type of hope has been termed 'goal-focused hope' and reflects a person's belief that they can achieve their life goals. Since its conceptualisation, this definition of hope has been used most within the relevant literature.

In cross-sectional studies a relationship between goal-focused hope and measures of SWB has been reported. Within a battery of positive psychology variables examined, hope was most "consistently and robustly" associated with life satisfaction (Park, Peterson, and Seligman, 2004). Unwin and Dickson (2010) examined the association between a specific type of hope termed goal-focused hope and SWB. They reported that goal-focused hope explained significant variance in SWB and was significantly correlated with life satisfaction

and positive affect. Although hope is consistently demonstrated to be important to SWB, the exact mechanism through which this occurs has not been examined.

High aspirations have been found to be a threat to SWB, due to the individual feeling discouraged by the long gap between where they are and where they want to be. Wilson (1967), and more recently Diener et al. (1999), have differentiated hope from high aspirations. It seems that moving *towards* ones goals is more important than achieving the goal (Csikszentmihalyi, 1991). Those with high goal-focused hope believe that the future that they wish for will occur as they are confident that they can do what they need to achieve it (Unwin & Dickson, 2010). Snyder et al. (2002) created a measure of hope based on this goal-focused conceptualisation, named The Hope Scale. The measure is comprised of 12 items that assess trait goal-focused hope and has been used extensively within the hope literature.

Though the relationship between goal-focused hope and SWB has been established, still little is understood about *how* goal-focused hope enhances SWB. It may be that goal-focused hope gives rise to certain experiences associated with achieving goals, and these experiences enhance SWB. Similarly, it may be that having goal-focused hope means an individual is more likely to try new activities and take on hobbies, which leads to the experience of positive affect that enhances SWB. One experience that goal-focused hope may give rise to is flow, which will be discussed in more detail in section 1.4.

It has been argued that the goal-focused definition of hope is too narrow and overlooks the importance of spiritual beliefs in a comprehensive understanding of hope (e.g. Scioli, 2007). The following section will begin by setting the context for the importance of spirituality more generally, and then move to explore a more recent and broader conceptualisation of hope – 'spiritual hope'.

1.3.2 Spiritual Hope

Spiritual health was first considered as part of the World Health Organisation's definition of health in 1998. Research has supported the importance of spirituality, with O'Connel and Skevington (2010) finding that spiritual beliefs provide resources for coping with illness and enhance SWB. There have been some early attempts to increase spirituality in order to enhance SWB (e.g. Goldstein, 2007), though these studies have been small and brief. However, initial results suggest enhancing spirituality may increase SWB, though the mechanisms of action require further study. One way spiritual beliefs may be associated with SWB is through 'spiritual hope'.

More recent conceptualisations of hope have taken a broader perspective and drawn from many theoretical domains, including spirituality (e.g. Scioli, 2007). Scioli (2007) suggested another type of hope, possibly in contrast to goal-focused hope, is 'spiritual hope'. He described spiritual hope as an integrative and creative energy, based on the belief of, and connectedness to, a power greater than oneself.

The measurement and conceptualisation of spiritual hope has been conceived by Scioli et al. (2011). They drew upon multiple disciplines and developed the trait Comprehensive Hope Scale (CHS), which has four domains of hope (mastery, attachment, survival and spiritual hope). The validity of the Spiritual Hope subscale of the Trait CHS was supported by significant correlations with related measures, such as the Spiritual Transcendence Scale (Piedmont, 1999) and religious coping (Pargament, Koenig & Perez, 2000).

The beliefs of those who score highly on spiritual hope have been investigated. Scioli et al. (2011) reported that those high on spiritual hope believed in a positive future due to a belief in a greater external force, which they may not fully understand. They were also more likely to feel they could achieve their life goals due to feeling empowered by a spiritual force/

presence. Scioli et al. (2011) suggested that spiritual hope may capture the 'middle ground of hope' with a collaborative, empowered sense of spiritual control, which lies between a purely internal or external locus of control.

Spiritual hope has been associated with SWB and positive self-belief. In a cross sectional study using students Unwin and Dickson (2010) found that spiritual hope was positively correlated with positive affect. Similarly, Scioli et al. (2011) found those high in spiritual hope were more likely to feel empowered to achieve their life goals. The research on this broader conceptualisation of hope is emerging and to-date has been developed and investigated by a small number of researchers, as such results need to be replicated.

As with goal-focused hope, it seems spiritual-hope is related to SWB and the process through which this occurs is not understood. One possibility is that having spiritual hope gives rise to certain experiences that enhance SWB. For example, an individual with high spiritual hope may pay particular attention to sacred moments in their life, which may positively affect both their affective and cognitive evaluation of their life. One experience spiritual hope may give rise to is mindfulness, which will be discussed in section 1.5.

1.3.3 Goal-focused Hope and Spiritual Hope

Thus far goal-focused hope and spiritual hope have been discussed separately. It is important to ascertain whether spiritual hope and goal-focused hope are different constructs. As research on spiritual hope is limited, there is little empirical literature examining this. However, Unwin and Dickson (2010) examined the relationships between goal-focused hope and spiritual hope, and the relationship between both types of hope and SWB. They found that goal-focused hope and spiritual hope were not correlated with each other, suggesting they are two independent constructs. Goal-focused hope accounted for a significant amount of variance in measures of SWB, but spiritual hope did not. Although spiritual hope did not independently predict variance in SWB, an interaction effect of the two forms of hope made a

significant contribution to the model. The results suggested that when goal-focused hope was low spiritual hope had a buffering or protective effect on SWB. As these results have not been replicated any conclusions drawn from them must be tentative.

To conclude, the available literature suggests that goal-focused hope and spiritual hope are distinct types of hope that are related to SWB, though the relationship between spiritual hope and SWB may be more complex and indirect than the relationship between goal-focused hope and SWB. The mechanism through which goal-focused hope and spiritual hope are related to SWB is not fully understood. It may be that the mechanisms through which goal-focused hope and spiritual hope affect SWB are different. Two concepts that may help explain the relationship between goal-focused hope and spiritual hope and SWB are flow and mindfulness, which will now be introduced in turn and discussed.

1.4 Flow

This section will discuss the concept of flow. The theoretical underpinnings of this construct are outlined followed by a detailed description of flow. An explanation of the experience of flow, how it is measured and the relationship between flow and SWB is then provided. Traits and dispositions that may explain variation in flow proneness are then examined, with goal-focused hope identified as a trait that may contribute to optimal preparatory conditions for flow and as such, may affect the likelihood one may experience flow. This section concludes with theoretically derived hypotheses.

The conceptualisation of flow was born out of the field of peak experiences. In 1968 Abraham Maslow began the study of peak experiences, with the peak of all experiences being self-actualisation. It was concluded that all could have peak experiences (e.g. Fritz & Avsec, 2007), though little was understood about such experiences. For example, the conditions needed in which to have peak experiences were not known. Nonetheless, Maslow's research

established that such experiences did exist, were potentially available to all, and were conducive to human development.

In the 1970s, humanistic psychologist Mihalyi Csikszentmihalyi wanted to build upon the literature of peak experiences by providing a phenomenological understanding of enjoyment/ intrinsically rewarding experiences. Particularly, he wanted to explore the stream of consciousness within such experiences, and from this study came the concept of flow. Flow was initially broadly described as an optimal psychological state in which complete absorption in an activity leads to a deeply enjoyable state (Csikszentmihalyi, 1975).

Since the 1970s, research has provided a fuller description of the phenomenon. Csikszentmihalyi and Nakmura (2010) described it as a state of high attention to a current task, coupled with a sense of automaticity. They described subjective elements of the experience as including enjoyment, reduced self-awareness, and altered time-perception. In his phenomenological analysis of flow, Elkington (2010) defined it as the dynamic flowing nature of experience that follows the optimal functioning of consciousness.

Csikszentmuhalyi (1991) described conditions needed in which to attain flow as: being involved in an activity with clear goals, having a balance between the perceived challenge and the perceived skills available, and that clear and immediate feedback on effectiveness and progress are available. Similarly, Elkington (2010) described the main components that are needed to experience flow as: a realistic task, good concentration, clear goals, the provision of near immediate feedback, a deep involvement to the elimination of daily concerns, a sense of control over action. As a consequence of these factors the concerns for self reduces (though can re-emerge as stronger after the experience), and finally, the subjective sense of time is altered. Considered together, the dimensions of flow presented by Csikszentmuhalyi (1991) and Elkington (2010) represent the optimal psychological state, whereas singularly, they represent elements of the state.

As the concept of flow became established within positive psychology and researchers wanted to better understand the experience empirically, measurement tools were developed. Jackson and Eklund (2002) developed flow scales, which were theoretically grounded in Csikszentmihalyi's conceptualisation of flow. These measures were refined by Martin and Jackson (2008) to assess individual's propensity to experience flow and the 36 item Dispositional Flow Scale-2 (DFS-2) was developed. The purpose of the scale was to assess the tendency to experience flow within a particular activity or setting nominated by the individual. The instructions focus upon the frequency of flow experiences. The authors state the measure was designed to assess individual differences regarding flow and it is anticipated the responses will remain stable over time. However, test re-test analysis has not been completed to ascertain temporal reliability. The authors reported robust internal consistency of the measure. However, as the measure is completed in relation to one activity it may not capture the entirety of an individual's flow repertoire (i.e. one person may experience high flow in one activity, whereas as another may experience lower flow but in many activities, the latter would not be captured by this measure). This should be borne in mind when interpreting scores.

Using assessment tools to measure flow the relationship between flow and SWB has been examined. Not only is flow an enjoyable experience, it is also considered in positive psychology to be an optimal state of well-being and has been shown to increase an individual's SWB. For example, Fritz and Avsec (2007) found that several of the dimensions of flow were positively related to SWB. Specifically, that clear goals, a challenge-skill balance, good concentration and the autotelic experience predicted positive affect. Similarly, with a small student sample, Rogatko (2009) found that completing a flow-inducing activity increased positive affect. A relationship has also been reported between flow and measures of life satisfaction, with Asakawa (2010) reporting that those who experienced more flow

expressed greater satisfaction with their lives. The relationship between flow and SWB is well established within the literature, with Mosing et al. (2012) reviewing the relevant literature and concluding a consistent positive association between flow and life satisfaction. However, in a more recent review Nistor (2011) stated that although SWB and flow are related, flow may have a different relationship with different aspects of SWB.

Thus far, the prescriptive conditions and descriptive characteristics of flow have been outlined, along with the importance of flow to SWB. It is notable that the literature regarding the definition and characteristics of flow reach consistent conclusions, with little variation. Similarly, the measurement of flow has been developed by a small group of researchers who agree upon what they are measuring and how to adequately assess it. That flow is associated with SWB is clearly evident within the empirical literature. However, what is less explicit is research detailing exactly how a flow state is reached and what characteristics/ dispositions may underlie flow. The empirical literature available demonstrates that the mechanisms through which flow arises are not fully understood. Elkington (2010) summarises this by suggesting that there are fundamental questions concerning the psychological processes that nurture a flow state and the way in which optimal psychological experiences are formed. Elkington conceptualised flow as a process and not an event, which requires underlying preparatory factors in the individual. It seems that research within the field of flow is at a point where it is comprehending what factors, beliefs, and experiences may both underlie flow and increase the likelihood of experiencing it.

Attempts have been made to ascertain what factors may lead to variation in flow proneness and the experience of flow. Flow has been described as a positive state of mind reliant upon the individual's perception of what a certain challenge is and whether they have the skills to match the challenge (Roberta & Francesco, 2013). That flow involves the appraisal of one's ability introduces subjectivity and thus the notion that there may be

individual variation in peoples' capacity to, and proneness to, experience flow. Mosing et al. (2012) examined genetic and non-genetic influences on flow proneness in a Swedish adult twin study (N = 444 pairs). They concluded that proneness to flow is influenced by genetic factors, which they hypothesised may be associated with traits that are conducive to flow, such as low neuroticism and high conscientiousness. Traits and dispositions other than personality are likely to be conducive to flow, such as a person's tendency to be hopeful. Given the importance of goals to flow, a person's tendency to have goal-focused hope may be particularly important (i.e. the hope that they can achieve and succeed in an activity means they are more likely to try, and so more likely to experience flow).

Researchers have suggested that flow extends beyond the experiential parameters mapped out by the current framework, specifically in what Elkington (2010) terms 'pre-flow' experiences. Similarly, Csikszentmihalyi (1991) coined the term "optimal preparation" to cite the significance of preparing mentally and physically for flow experience. It seems plausible that those traits and dispositions that affect an individual's flow proneness may do so via creating non-optimal and optimal preparatory states, one such disposition may be goal-focused hope.

In summary, flow is an important construct that contributes to SWB. Certain conditions and behaviours are needed in which to experience flow. There is individual variation in terms of someone's capacity to experience flow. This variation may be associated with preparatory conditions and dispositions that enhance the likelihood of flow being experienced. Empirical evidence demonstrates that goals are important to goal-focused hope, goal pursuit is central to the concept of flow, and having goals is important to SWB. It seems conceivable that goal-focused hope may form part of the optimal preparation conducive to flow and that goal-focused hope and flow are associated. Further, based on a cognitive model

(e.g. Beck, 2011), it is plausible that a person with high goal-focused hope (i.e. cognition) may experience more flow (i.e. behaviour), which would enhance their SWB (i.e. affect).

1.5 Mindfulness

The following section will discuss mindfulness and begins with considering consciousness from a broader perspective and mindfulness as a quality of consciousness. Academic, clinical and spiritual definitions of mindfulness will then be examined, drawing upon the development of assessment tools as a way of further examining conceptualisations of mindfulness. The relationship between mindfulness and spirituality will then be discussed, considering theory and empirical evidence. This section concludes with empirically driven theoretical hypotheses regarding the relationship between spiritual hope, mindfulness, and SWB.

Consciousness encompasses awareness and attention, which co-exist. Awareness is the system through which we monitor the inner and outer environment; attention is focusing conscious awareness to provide a deeper awareness of a smaller range of experience (Westen, 1999). Many philosophical, spiritual, and psychological traditions emphasize that the quality of consciousness is important to SWB (Wilber, 2000). One quality of consciousness that has received attention is mindfulness.

Mindfulness is rooted in the Buddhist tradition and has been defined by spiritual gurus, academics and clinicians alike. Nyanaponika Thera (1972) described mindfulness as 'the clear and single-minded awareness of what actually happens to us and in us at the successive moments of perception' (p. 5); Brown and Ryan (2003) defined mindfulness as a quality of consciousness with clarity and vividness, where one openly experiences whatever enters experience; a commonly known definition of mindfulness that is used within the NHS was provided by Kabat-Zinn (1994) who stated that mindfulness was 'paying attention in a particular way, on purpose, in the present moment, non-judgementally'. Though from

different disciplines, it is of note that these definitions are similar to one another, with all including openness, clarity and present-moment awareness.

Traditional Eastern mindfulness meditation practices have been adapted for secular use and incorporated into several interventions. Clinically, mindfulness is part of what has been termed the 'third-wave' of psychological therapies, which refers to a new generation of cognitive behaviour therapy that emphasizes issues such as '…spirituality, acceptance, mindfulness, cognitive defusion, dialectics, values, and relationship. Third wave methods are often more experiential than didactic; their underlying philosophies are more contextualistic than mechanistic' (Hayes, 2004, p. 640). Instead of challenging an individual's irrational or negative thinking, which may occur in other therapies, mindfulness-based approaches focus on the individual's relationship to thinking itself. It is a transformative process in which the client explores the way they relate to thoughts, feelings, emotions, and actions.

In a review of relevant literature, Carmody and Baer (2007) concluded that interventions that incorporate mindfulness lead to clinically significant improvements in a range of populations, including those with binge eating disorders and mood difficulties. In a comprehensive meta-analysis Baer (2003) concluded that mindfulness-based interventions help alleviate a range of mental health difficulties (e.g. chronic pain, generalised anxiety, and panic disorders). Intervention studies have also found that mindfulness techniques have been effective in the promotion of well-being (e.g. Brown & Ryan, 2003). Carmody and Baer (2007) found that regular meditation cultivated mindfulness skills in everyday life, which led to improved psychological functioning, including enhanced SWB. Similarly, Brown and Ryan (2003) reported that experiencing mindfulness was strongly and inversely associated with measures of distress (i.e. anxiety, depression, and anger) and positively associated with measures of SWB (i.e. life satisfaction and self-actualisation). More recently Baer, Carmody

and Hunsinger (2012) reported that the development of mindfulness skills preceded stress reduction in an MBSR group, though no control group was used.

Wilber (2000) posits that the process of using mindfulness to bring awareness to facets of experience that have been ignored or distorted may convert 'hidden subjects' into 'conscious objects' that can be differentiated from, transcended, and integrated into the self, creating a more complete whole. Brown and Ryan (2003) argued that although automaticity may save time, it may have problematic consequences, such as a lack of awareness of the present moment. In contrast, an open awareness of experience, as developed through mindfulness, may be valuable in selecting behaviours that are consistent with one's needs and values, thus, enhancing SWB through self-regulated activity (Ryan & Deci, 2000). In summary, the literature demonstrates that the experience of mindfulness and developing mindfulness skills is associated with positive outcomes, including enhanced SWB. However, a significant limitation of many intervention studies assessing mindfulness is the lack of control groups (Baer, 2003).

Due to the importance of mindfulness to SWB and positive clinical outcomes, there have been many measures developed to assess mindfulness. With the development of each measure there has also been an attempt to operationalize mindfulness. In 2003, Brown and Ryan conceptualised mindfulness as a single factor and developed a one-dimensional instrument yielding a single score (MAAS: Mindful Attention Awareness Scale). In contrast, Baer, Smith, and Allen (2004) developed a measure which conceptualised mindfulness as a set of interrelated skills and developed an assessment tool that measured mindfulness at a facet level. More recently, Baer et al. (2008) built upon their multi-faceted conceptualisation of mindfulness and developed the Five Facet Mindfulness Questionnaire (FFMQ). Based on factor analyses, five mindfulness factors were identified: observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity. This measure is one of the

most widely used measures of mindfulness representing the best of several independent researchers' views on what mindfulness is. Though this tool offers the opportunity to assess mindfulness at a facet level, a single score can also be derived (e.g. Carmody & Baer, 2008).

Within the literature on mindfulness an area that is debatable is whether mindfulness and spirituality are associated. The Buddhist practitioner considers mindfulness integral to their spiritual practice. As part of their spiritual practice they develop many skills that are taught on mindfulness programs within the NHS (e.g. developing the ability to keep consciousness in the present moment, accepting that which is beyond control, and adopting a neutral stance towards internal experience). Kornfield (1993) suggested that mindfulness offers a method of cultivating spirituality irrespective of religious affiliation. He suggested this occurs as mindfulness skills lead to a disengagement from a narrow self-focus, and engaging in a broad view of interconnectedness, in which oneself is not seen as separate. Indeed, Hayes (2004) a significant proponent of third-wave therapies within the NHS, of which mindfulness is one, stated that spirituality as one of the emphases of this group of therapies.

Thus far, the potential association between spirituality and mindfulness has been explored from a theoretical perspective. However, there is also an evidence base that suggests mindfulness and spirituality are associated. Engaging spiritually has been proposed as a key mechanism of change in mindfulness-based therapies by Kristeller (2010). To examine this, Greeson et al. (2011) investigated spirituality in relation to Mindfulness-Based Stress Reduction (MBSR) outcomes. They reported that after MBSR both daily spiritual experiences and SWB were enhanced and that mindfulness mediated the relationship between daily spiritual experiences and SWB. Further, participants were asked why they were completing the course and over half stated that they had wanted to explore or deepen their sense of spirituality, with the majority reporting that the mindfulness course had achieved

this. The authors suggested that increases in spirituality may be a key mechanism in which MBSR programs benefit clients. Such results suggest that spirituality and mindfulness are associated with each other and that participants of mindfulness courses may associate mindfulness with spirituality.

In a similar study, Carmody, Reed, Kristeller and Merriam (2008) examined associations between spirituality and mindfulness in a group of students attending a MBSR program. They reported that increases in mindfulness were associated with increases in spirituality and that attending the course resulted in an improvement in spiritual well-being. However, a limitation of this study was that there was no control group to compare the level of absolute change in spirituality resulting from participation in the program. Other studies have reported mixed results, with Leigh, Bowen and Marlatt (2005) reporting a positive correlation between mindfulness and one measure of spirituality and no significant association between mindfulness and a second measure of spirituality.

The empirical study of mindfulness and spirituality is an emerging area of interest and as such results have yet to be replicated. However, empirical evidence points to a relationship between spirituality and mindfulness. If one were to adopt a conceptualisation of mindfulness which includes an association with spirituality, it provides the rationale for the hypothesis that spiritual hope may be associated with mindfulness. It seems plausible that if one has hope that something greater than the self exists and we are connected to this (i.e. spiritual hope), this belief would bring with it an acceptance of reality and thus present moment awareness (i.e. mindfulness), which enhances SWB. Indeed, Wallace and Shapiro (2006) suggested that enhanced attention to and awareness of the interconnectedness of all things engenders greater mindfulness experiences, and thus enhances mental health. Though tentative due to the limited literature available, it would seem that the view that spirituality

and mindfulness are associated is consistent with both Eastern meditative traditions and certain Western psychological theories.

To conclude, there has been consistent empirical support for the association between mindfulness and SWB and mindfulness is used clinically with a range of difficulties. As evidence for the efficacy of mindfulness grows, so does the importance of investigating factors that may be associated with mindfulness. There is an emerging literature base that indicates mindfulness and spirituality are associated with each other. A future area of research is to examine whether spiritual hope is associated with mindfulness and whether the relationship between spiritual hope and mindfulness contributes to SWB. Based on a cognitive model (e.g. Beck, 2011), one may hypothesise that spiritual hope (i.e. cognition), gives rise to mindfulness (i.e. behaviour), which leads to enhanced SWB (i.e. affect).

1.6 Flow and Mindfulness

Thus far flow and mindfulness have been discussed as separate constructs. However, it was of note for the author whilst reviewing relevant literature that similar words and phrases are used to describe what flow and mindfulness are (e.g. optimal human states), the experience of flow and mindfulness (e.g. positive human experiences) and the benefits (e.g. enhancing SWB). Although it is beyond the scope of this review to explore this in detail, it was thought to be of benefit to the reader to outline what the potential areas of overlap and differentiation are between the two constructs. As this has not been the focus of any studies, the following discussion is based upon the author's extrapolations from the literature reviewed thus far. Descriptions of flow and mindfulness for comparison within this section were taken from Csikszentmihalyi (1991), Elkington (2010), Kabat-Zinn (1994), and Baer, (2003).

Flow and mindfulness are both associated with personal growth and are described as positive human experiences that enhance SWB. Both experiences involve attentional systems

and present-moment focus, with flow involving absolute focus and mindfulness involving both a broad awareness and a specific focus. These similarities are reflected within the language used to describe both experiences, for example, flow can be described as a meditative experience and mindfulness is often described as meditation.

However, on review of the literature there are key differences between flow and mindfulness. Mindfulness is described as a quality of consciousness characterised by clarity and vividness of current experience, in contrast to states of automatic functioning, such as flow. When experiencing flow, attention is focused on one part of experience to the extent that general awareness, for example of time, is lost, whereas when mindful one is open to experiencing whatever enters awareness. A clear goal is needed to experience flow, whereas mindfulness is described as goal-less, with the practice of being mindful being the entirety of the process. Flow is associated with happiness, whereas mindfulness is associated with a sense of equanimity and contentedness. A further difference may be the preparatory states needed in which to experience flow and mindfulness. As flow includes a focus on goals, flow may be enhanced if one has higher goal-focused hope. In contrast, given the association between mindfulness and elements of spirituality, an individual with heightened spiritual hope may be more likely to experience mindfulness.

The interaction of flow and mindfulness is an emerging area of interest within sport psychology. Kee and Wang (2008) measured characteristics of mindfulness in a student sample and clustered them into high and low mindfulness groups and looked at flow disposition. They found that the higher mindfulness cluster scored significantly higher on overall flow disposition, when compared to the lower mindfulness cluster. Aherne, Moran, and Lonsdale (2011) explored factors that may enhance flow to improve performance. They reported that athletes that had mindfulness training had an increase in global flow scores from baseline. Recent research tentatively suggests that training in mindfulness may be associated

with a greater likelihood to experience flow. This may be due to mindfulness increasing attention and concentration. However, thus far studies have been conducted with small samples and are cross-sectional designs, making causality difficult to infer.

In summary, it seems possible that flow and mindfulness are on a continuum of focus as opposed to completely different entities. If both experiences were conceptualised in this way flow would exist at one end of the spectrum with a specific focus on the current activity, and mindfulness at the opposite end with an awareness of all that is within current experience. Emerging research suggests that the two can be used together, specifically within the area of sport psychology, though this is tentative.

1.7 Conclusion

The literature demonstrates that SWB is an important construct, with Diener et al. (1999) recognising that peoples' dispositions play an important role in their experience of SWB and suggesting that research should focus on understanding the processes that underlie SWB. Goal-focused hope, spiritual hope, flow and mindfulness, are identified as internal psychological factors that are related to SWB. The mechanisms through which goal-focused hope and spiritual hope are related to SWB are not understood. The following theoretical hypotheses are based on a cognitive model of cognition, behaviour and affect (Beck, 2011).

Empirical evidence has shown that goals are important to both goal-focused hope and flow. There are theoretical reasons and empirical support to suggest that goal-focused hope may be a preparatory state for flow. If this were the case, then the experience of flow may mediate the relationship between goal-focused hope and SWB (Figure 1a for a pictorial representation).

Spirituality is important to spiritual hope and research suggests it is also important to mindfulness, this provides a basis from which to predict that these constructs are associated with each other. Based on this empirically and theoretically informed proposal, it is

theoretically plausible that mindfulness mediates the relationship between spiritual hope and SWB (Figure 1b for a pictorial representation).

If the proposed theoretical hypotheses were examined the findings would provide important clinical implications regarding the type of hope a person may hold and how this is related to potential areas for intervention (i.e. flow-based interventions and mindfulness-based interventions) and SWB.

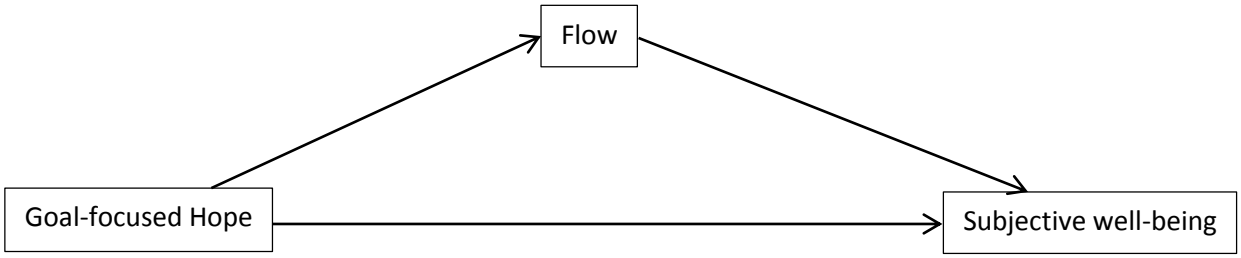

Figure 1a. A diagram of the mediation hypotheses proposed between GFH, flow and SWB

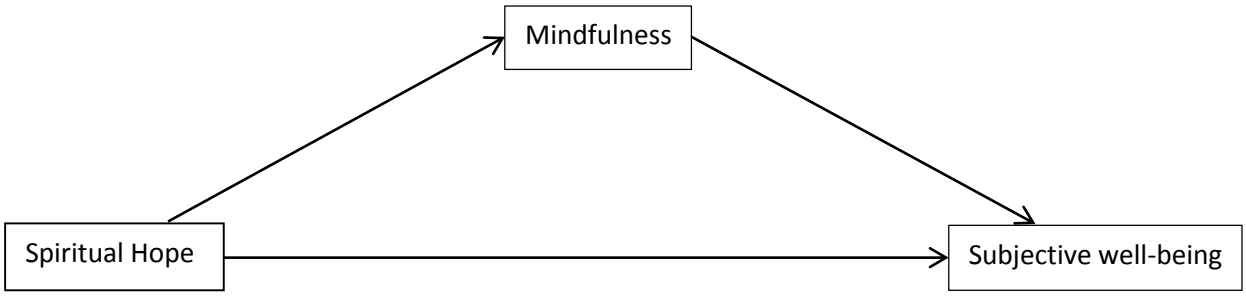

Figure 1b. A diagram of the mediation hypotheses proposed between SH, mindfulness and SWB

1.8 References

Action for Happiness Campaign. Retrieved 01.06.13, from http://www.actionforhappiness.org/

Aherne, C., Moran, A., & Lonsdale, C. (2011). The effect of mindfulness training on athletes' flow: An initial investigation. *The Sport Psychologist, 25*, 177–190.

Andrews, F. M., & Withey, S. B. (1976). *Social Indicators of Well-being.* New York: Plenum Press.

Asakawa, K. (2010). Flow experience, culture, and well-being: How do autotelic Japanese college students feel, behave, and think in their daily lives? *Journal of Happiness Studies, 11,* 205-223.

Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice, 10,* 125-143.

Baer, R. A., Carmody, J., & Hunsinger, M. (2012). Weekly change in mindfulness and perceived stress in mindfulness-based stress reduction program. *Journal of Clinical Psychology, 68*(7), 755-765.

Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report: The Kentucky Inventory of Mindfulness Skills. *Assessment, 11,* 191-206.

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13,* 27-45.

Baer, R., Smith, G., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., Walsh, E., Duggan, D., & Williams, J. (2008). Construct validity of the five facet mindfulness questionnaire in meditating and non-meditating samples. *Assessment, 15*(3), 329-342.

Beck, J. (2011). Cognitive behaviour therapy: Basic and beyond (2nd ed.). Guilford Press.

Beekman, A., Copeland, J., & Prince, M. (1999). Review of community prevalence of depression in later life. *The British Journal of Psychiatry, 174,* 307-311.

Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. C., Carmody, J., Segal, Z., Abbey, S., Speca,M., Velting, D., & Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice, 11*, 230-241.

Brown, K. & Ryan, R. (2004). Fostering health self-regulation from within and with- out: A self-determination theory perspective. In Linley, P. & Joseph, S. (Eds.) *Positive psychology in practice* (pp. 105–124). Hoboken, NJ: Wiley.

Brown, K., & Ryan, R. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84*(4), 822-848.

Burns, R. A., Anstey, K. J., & Windsor, T. D. (2011). Subjective well-being mediates the effects of resilience and mastery on depression and anxiety in a large community sample of young and middle-aged adults. *Australian and New Zealand Journal of Psychiatry, 45*, 240–248.

Carmody, J., & Baer, R. (2007). Relationships between mindfulness practice and levels of mindfulness, medical and psychological symptoms and well-being in a mindfulness-based stress reduction program. *Journal of Behavioural Medicine, 31*, 23-33.

Carmody, J., Reed, G., Kristeller, J., & Merriam, P. (2008). Mindfulness, spirituality, and health related symptoms. *Journal of Psychosomatic Research, 64*, 393-403.

Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. San Francisco: Jossey-Bass.

Csikszentmihalyi, M. (1991). *Flow: the psychology of optimal experience*. Harper Perennial: Modern Classics.

Csikszentmihalyi, M., & Mei-Ha Wong, M. (1991). Affiliation motivation and daily experience: Some issues on gender differences. *Journal of Personality and Social Psychology, 60*(1), 154-164.

Csikszentmihalyi, M., & Nakmura, J. (2010). Effortless attention in everyday life: A systematic phenomenology. In B. Bruya (Ed.). *Effortless attention: A new perspective in the cognitive science of attention and action* (pp. 179-190). Cambridge, MA: The MIT Press.

Deikman, A. J. (1982). *The observing self*. Boston: Beacon Press.

Diener, E. (2008). *Happiness: unlocking the mysteries of psychological wealth*. Malden, MA: Blackwell Pub.

Diener, E. (2012). New findings and future directions for subjective well-being. *American Psychologist, 67*(8), 590-597.

Diener, E., & Chan, M. Y. (2011). Happy people live longer: Subjective well-being contributes to health and longevity. *Applied Psychology: Health and Well-being, 3,* 1-43.

Diener, E., & Diener, M. (1995). Cross-cultural correlates of life satisfaction and self-esteem. *Journal of Personality and Social Psychology, 68,* 653-663.

Diener, E., Lucas, R., & Oishi, S. (2002). Subjective well-being: The science of happiness and life satisfaction. In Snyder, C. & Lopez, S. (Eds.) *The handbook of positive psychology* (pp. 63 – 73). Oxford: Oxford University Press.

Diener, E., Smith, H., & Fujita, F. (1995). The personality structure of affect. *Journal of Personality and Social Psychology, 69,* 33–37.

Diener, E., & Suh, E. M. (1998). Age and subjective well-being: An international analysis. *Annual Review of Gerontology and Geriatrics, 17,* 304-324.

Diener, E., Suh, E. M., Lucas R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125*, 276-302.

Dimidjian, S., & Linehan, M. M. (2003). Mindfulness practice. In W. O'Donohue, J. E. Fisher, & S. C. Hayes (Eds.), *Empirically supported techniques of cognitive behaviour therapy: A step-by-step guide for clinicians.* New York: John Wiley.

Elkington, S. (2010). Articulating a systematic phenomenology of flow: an experience-process perspective. *Leisure, 34*(3), 327–360.

Fritz. B., & Avsec, A. (2007). The experience of flow and subjective well-being of music students. *Horizons of Psychology, 16*(2), 5-17.

Fujita, F., Diener, E., & Sandvik, E. (1991). Gender differences in negative affect and well-being: The case for emotional intensity. *Journal of Personality and Social Psychology, 61*(3), 427-434.

Fujiwara, D., & Campbell, R. (2011). *Valuation techniques for social cost-benefit analysis: Stated preference, revealed preference and subjective well-being approaches. A discussion of the current issues.* Retrieved 10.06.13, from http://www.hm-treasury.gov.uk/d/green_book_valuationtechniques_250711.pdf

Goldstein, E. (2007). Sacred moments: Implications on well-being and stress. *Journal of Clinical Psychology, 63,* 1001–1019.

Greeson, J., Webber, D., Smoski, M., Brantley, J., Ekblad, A., Suarez, E., & Wolever, R. (2011) Changes in spirituality partly explain health-related quality of life outcomes after Mindfulness-Based Stress Reduction. *Journal of Behavioural Medicine, 34*, 508–518.

Hayes, S. C. (2004). Acceptance and Commitment Therapy and the new behavior therapies: Mindfulness, acceptance and relationship. In S. C. Hayes, V. M. Follette, & M. Linehan (Eds.), *Mindfulness and acceptance: Expanding the cognitive behavioral tradition* (pp. 1-29). New York: Guilford.

Henderson, M., Glozier, N., & Elliott, K. (2005). Long term sickness and absence is caused by common conditions and needs managing. *British Medical Journal, 330*(7495), 802-803.

Herbert, R., Weinstein, E., Martire, L., & Schulz, R. (2006). Religion, spirituality and the well-being of informal caregivers: A review, critique, and research prospectus. *Aging and Mental Health, 10*(5), 497–520.

Herzog, A. R., & Rodgers, W. L. (1981). Age and satisfaction: Data from several large surveys. *Research on Aging, 3,* 142–165.

Hubble, M. A., Duncan, B. L., & Miller, S. D. (1999). *The heart and soul of change: What works in therapy.* Washington, DC: American Psychological Association.

Inglehart, R. (1990). *Culture shift in advanced industrial society*. Princeton, NJ: Princeton University Press.

Jackson, S.A. (1995). Factors influencing the occurrence of flow state in elite athletes. *Journal of Applied Sport Psychology, 7,* 138–166.

Jackson, S. A., & Eklund, R. C. (2002). Assessing flow in physical activity: The FSS-2 and DFS-2. *Journal of Sport and Exercise Psychology, 24,* 133-150.

Jones, J., Huxtable, C., Hodgson, J., & Price, M. (2003). *Self-reported work-related illness in 2001/2002.* London: HSE.

Kabat-Zinn, J. (1982). An out-patient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results. *General Hospital Psychiatry, 4,* 33–47.

Kabat-Zinn, J. (1994). *Wherever you go, there you are: Mindfulness mediation in everyday life*. New York: Hyperion.

Kasser, T., & Ryan, R. M. (1996). Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin, 22,* 280–287.

Kee, Y. & Wang, J. (2008). Relationships between mindfulness, flow dispositions and mental skills adoption: A cluster analytic approach. *Psychology and Sport and Exercise, 9,* 393-411.

Keyes, C., & Magyar-Moe, J. (2003). The measurement of utility of adult subjective well-being. In Lopez, S. & Snyder, C. (2003). *Positive psychological assessment,* 411-425.

Kornfield, J. (1993). *A path with heart*. New York: Bantam Books.

Kristeller, J. (2010). Spiritual engagement as a mechanism of change in mindfulness- and acceptance-based therapies. In R. A. Baer (Ed.), *Assessing mindfulness & acceptance processes in clients: Illuminating the theory & practice of change* (pp. 155–184). Oakland, CA: New Harbinger Publications, Inc.

Larsen, D., & Stege, R, (2010). Hope-focused practices during early psychotherapy sessions part I: Implicit approaches. *Journal of Psychotherapy Integration, 20*(3), 271–292.

Larsen, D., & Stege, R, (2010). Hope-focused practices during early psychotherapy sessions part II: explicit approaches. *Journal of Psychotherapy Integration, 20*(3), 293–311.

Leigh. J., Bowen, S., & Marlatt, A. (2005). Spirituality, mindfulness and substance abuse. *Addictive Behaviours, 30,* 1335-1341.

Martin, A. J., & Jackson, S. A. (2008). Brief approaches to assessing task absorption and enhanced subjective experience: Examining 'short' and 'core' flow in diverse performance domains. *Motivation and Emotion, 32,* 141-157.

Mosing, M., Magnusson, P., Pederson, N., Nakamura, J., Madison, G., & Ullen, F. (2012). Heritability of proneness for psychological flow experiences. *Journal of Personality and Individual Differences, 53,* 699–704.

Nistor, A. (2011). Developments on the happiness issue: A review of the research on subjective well-being and flow. *Scientific Journal of Humanistic Studies, 3*(4), *58-66.*

Nyanaponika, T. (1972). *The power of mindfulness.* San Francisco, CA: Unity Press.

O'Connel, K., & Skevington, S. (2010). Spiritual, religious, and personal beliefs are important and distinctive to assessing quality of life in health: A comparison of theoretical models. *British Journal of Health Psychology, 15,* 729–748.

Office for National Statistics. (2011). *Analysis of experimental subjective well-being data from the annual population survey, April to September 2011.* Retried on 03.05.13, from http://www.ons.gov.uk/ons/rel/wellbeing/measuring-subjective-wellbeing-in-the-uk/analysis-of-experimental-subjective-well-being-data-from-the-annual-population-survey--april---september-2011/report-april-to-september-2011.html

Oishi, S. (2012). *The psychological wealth of nations: Do happy people make a happy society?* Malden, MA: Wiley-Blackwell.

Okun, M. A., Stock, W. A., Haring, M. J., & Witter, R. A. (1984). Health and subjective well-being: A meta-analysis. *The International Journal of Ageing and Human Development, 19*(2), 111-132.

Ostir, G., Markides, K., Black, S., & Goodwin, J. (2000). Emotional well-being predicts subsequent functional independence and survival. *Journal of the American Geriatrics Society, 48,* 473-478.

Pargament, K. I., Koenig, H. G., & Perez, L. M. (2000). The many methods of religious coping: Development and initial validation of the RCOPE. *Journal of Clinical Psychology, 56,* 519–543.

Park, N., Peterson, C., & Seligman, M. E. P. (2004). Strengths of character and well-being. *Journal of Social and Clinical Psychology, 23,* 603–619.

Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. *Psychological Assessment, 5,* 164-172.

Piedmont, R. L. (1999). Does spirituality represent the sixth factor of personality? Spiritual transcendence and the five-factor model. *Journal of Personality, 67,* 985–1013.

Priller, E., & Schupp, J. (2011). Social and economic characteristics of financial and blood donors in Germany. *DIW Economic Bulletin, 6,* 23-30.

Roberta, M., & Francesco, C. (2013). Flow experience and job characteristics: Analysing the role of flow in job satisfaction. *Testing, Psychometrics, Methodology in Applied Psychology, 20*(1), 13-26.

Rogatko, T. (2009). The influence of flow on positive affect in college students. *Journal of Happiness Studies, 10,* 133-148.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55,* 68–78.

Sawatzky, R., Ratner, P., & Chiu, L. (2005). A meta-analysis of the relationship between spirituality and quality of life. *Social Indicators Research, 72,* 153–188.

Scioli, A. (2007). Hope and spirituality in the age of anxiety. In R.J. Estes (Eds.), *Advancing quality of life in a turbulent world* (pp. 135-150). New York: Springer.

Scioli, A., Ricci, M., Nyugen, T., Biller, H. B., & Scioli, E. R. (2011). Hope: Its nature and measurement. *Psychology of Religion and Spirituality, 3*(2), 78-97.

Sheldon, K., & Cooper, L. (2008). Goal Striving Within Agentic and Communal Roles: Separate but Functionally Similar Pathways to Enhanced Well Being**.** *Journal of Personality, 76*(3), 415-448.

Sheldon, K., & Lyubomirsky, S. (2004). Achieving sustainable new happiness: prospects, practices and prescriptions. In Linley, P. & Joseph, S. (Eds.) *Positive Psychology in Practice* (pp. 127-145). Hoboken, NJ: Wiley.

Siedleki, K., Salthouse,T., Oishi, S., & Jeswani S. (2013). The relationship between social support and subjective well-being across age. *Social Indicators Research.* Retrieved on 10.06.13, from http://link.springer.com.ezproxy, liv.ac.uk/content/pdf/10.1007%2Fs11205-013-0361-4.pdf

Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry, 13*(4), 249–275.

Snyder, C. R., Harris, C., Anderson, J.R., Holleran, S. A., Irving, L. M., & Sigman, S. T. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*(4), 570-585.

Stones, M. J., & Kozma, A. (1985). Structural relationships among happiness scales: A second order factorial study. *Social Indicators Research, 17,* 19–28.

Tesch-Romer. C., Motel-Klingebiel, A., & Tomasik, M. (2007). Gender differences in subjective well-being: Comparing societies with respect to gender equality. *Social Indicators Research, 85,* 329–349.

Unwin, J., & Dickson, J. (2010). Goal focused hope, spiritual hope, and well-being. *Research in the Social Scientific Study of Religion, 21*, 161–174.

Watson, D., & Clark, L. A. (1984). Negative affectivity: The disposition to experience negative aversive emotional states. *Psychological Bulletin, 96,* 465–490.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology, 47,* 1063–1070.

Wallace, B. A., & Shapiro, S. L. (2006). Mental balance and well- being. Building bridges between Buddhism and Western psychology. *American Psychologist, 61,* 690–701.

Watson, N., & Nesti, M. (2005). The role of spirituality in sport psychology. *Journal of Applied Sport Psychology, 17,* 228–239.

Werner, S. (2012). Subjective well-being, hope, and needs of individuals with serious mental illness. *Psychiatry Research, 196*(2-3), 214-219.

Westen, D. (1999). *Psychology: Mind, brain, and culture* (2nd ed.). New York: Wiley.

Wilber, K. (2000). *Integral psychology: Consciousness, spirit, psychology, therapy*. Boston: Shambhala.

Wilson, W. (1967). Correlates of avowed happiness. *Psychological Bulletin, 67,* 294-306.

World Health Assembly (1998). *The world health report 1998.* Retrieved 10.06.13, from http://www.who.int/whr/1998/en/whr98_en.pdf

CHAPTER 2: EMPIRICAL PAPER

Hope, Flow, Mindfulness and Subjective Well-being: An Exploration of Associations and Relationships

Paper to be submitted to The Journal of Positive Psychology

(see appendix A for author guidelines)

2.1 Abstract

Subjective well-being (SWB) is important to physical and mental health. Internal psychological factors are important to SWB, including hope (goal-focused hope – GFH, and spiritual hope - SH). Little is known about the mechanisms through which hope affects SWB. Two constructs associated with SWB are flow and mindfulness. This study investigated associations between GFH, SH, flow, mindfulness, and SWB and mediation models from GFH to SWB via flow, and SH to SWB, via mindfulness. Analyses were conducted on 98 staff and students from a UK university. As expected, GFH was positively correlated with flow and SWB. Counter to expectation, SH was not related to any study variables other than mindfulness. Flow did not mediate the relationship between GFH and SWB. However, as predicted, results suggest that an indirect relationship between SH and SWB is mediated via mindfulness. The study informs theoretical understanding of the relationship between hope and SWB.

Key words: subjective well-being; goal-focused hope; spiritual hope; flow; mindfulness; mediation

2.2 Introduction

In addition to researching the difficulties and problems people can face in life and how to alleviate them, it is important to also understand what makes people happy; what affects whether someone evaluates their life as good or bad. Hope, flow, and mindfulness (Snyder et al., 1991; Csikszentmuhalyi, 1991; Wilber, 2000) and have been associated with subjective well-being (SWB). Flow refers to focused attention on, and absorption in, a current activity (Csikszentmuhalyi, 1991). In contrast, mindfulness refers to a quality of consciousness characterised by clarity and vividness of current experience (Kabat-Zinn, 1994). This study aims to extend current literature by examining the relationship between two distinct types of hope (SH and GFH) and SWB, and possible mechanisms underlying this relationship.

SWB has been defined broadly as a person's cognitive and affective evaluation of their life (Diener, Lucas & Oishi, 2002). SWB appears to be a broad construct that includes emotional responses and cognitive evaluation of satisfaction with life (Diener et al., 1999). Diener et al. (2002) posit that each of the elements that form SWB (positive affect, negative affect and satisfaction with life) should be measured separately by researchers, rather than attempting to use a unitary or composite measurement. This is to ensure all aspects of SWB are captured.

There is increasing evidence for the importance of SWB (e.g. Sheldon & Lyubomirsky, 2004). For example, SWB has been found to be a protective factor for older adults against the onset of disability (Ostir, Markides, Black & Goodwin, 2000). In contrast, low SWB has been related to increased depression (e.g. Keyes & Magyar-Mow, 2003). Increasingly, interventions are being designed to enhance well-being as well as reduce symptoms of distress and mood difficulties (e.g. Diener et al., 2002). The importance of SWB

means it is necessary that we understand the cognitive and affective processes and experiences that may maintain and enhance it.

Hope has been commonly defined as the cognitive process of positive future thinking (e.g. Snyder, 2002). Within the field of positive psychology the association between hope and SWB has been well documented (e.g. Scioli, 2007; Snyder, 2002), with hope thought to be a concept that significantly contributes to well-being (Snyder, 2002). The exact mechanisms through which this occurs have not been examined.

The concept of hope has been variously defined within the literature. One conceptualisation has been provided by Snyder et al. (1991), who defined hope as a person's ability to perceive a pathway to their goals and their sense of control over these paths. This type of hope has been termed 'goal-focused hope'. More recently, conceptualisations of hope have also viewed spirituality as an important component. Scioli (2007) describes 'spiritual hope' as an integrative and creative energy, based on the belief in a power or force greater than oneself. Past research suggests that these two forms of hope appear to be independent from each other (Unwin & Dickson, 2010).

The mechanism through which goal-focused hope, spiritual hope and SWB are related has not been investigated. Two concepts that may help explain the association between goal-focused hope and spiritual hope and SWB are flow and mindfulness, respectively.

The concept of flow arose from the study of optimum human states (Seligman, 2002). Flow is the mental state of being in which the person is fully immersed in the current activity, for example, reading or running (Csikszentmihalyi & Nakmura, 2010). Csikszentmuhalyi (1991) describes the conditions needed in which to attain flow as: an activity with clear goals, a balance between the perceived challenge and the perceived skills available, and clear and immediate feedback on effectiveness and progress. Flow has been described as an intense feeling of enjoyment and experiences of flow are considered in positive psychology to be an

optimal state of well-being, and have been shown to increase an individual's SWB (e.g. Fritz & Avsec, 2007). The notion of goals is important both to goal-focused hope and flow. Therefore, it seems conceivable that goal-focused hope is likely to contribute to the context in which flow can be experienced, thus enhancing SWB.

In contrast, mindfulness has been described as 'paying attention in a particular way, on purpose, in the present moment, non-judgementally' (Kabat-Zinn, 1994). A person practicing mindfulness is very aware of the present moment, but does not actively engage with it (Bishop et al., 2004). Intervention studies have found that mindfulness techniques have been effective in the treatment of a range of mental health difficulties (e.g. Baer, 2003) and the promotion of well-being (Brown & Ryan, 2003). As a consequence, mindfulness is increasingly used within the National Health Service (NHS) as a form of psychological intervention. Spiritual hope is related to the belief one is connected to a higher power and mindfulness-based interventions originate from Eastern Buddhist meditation practices that utilise the concept of connectedness to all things (Baer, 2003) and is thought to be associated to spirituality (e.g. Kornfield, 1993). Therefore, it seems plausible that someone who has high spiritual hope may be predisposed to experience more mindfulness, which may increase their SWB.

To sum, flow and mindfulness represent distinct psychological mechanisms. Mindfulness is described as a quality of consciousness characterised by clarity and vividness of current experience, in contrast to states of automatic functioning, such as flow. When experiencing flow, attention is focused on the task to hand to the detriment of a more general awareness, whereas when mindful, one is open to experiencing whatever enters awareness. A clear goal is needed to experience flow, whereas mindfulness is described as goal-less. Flow is associated with happiness, in contrast to mindfulness, which is associated with a sense of

equanimity and contentedness. And finally, a further difference that is highly relevant to this study may be the preparatory states needed in which to experience flow and mindfulness.

In summary, goal-focused hope and spiritual hope represent distinct constructs and cognitive belief systems that may be differentially related to measures of SWB. The literature suggests there are conceptual grounds for expecting flow to mediate the relationship between GFH and SWB, and to expect mindfulness to mediate the relationship between SH and SWB, respectively. Examining these proposed relationships represents the main aim of the present study. The secondary aim was to study the relationships among the main study variables.

It was predicted that:

* GFH, SH, flow and mindfulness would be positively correlated with measures of SWB (i.e. positive affect and satisfaction with life), other than NA where a negative correlation was predicted.

* GFH and flow would be positively correlated, as would SH and mindfulness.

* Flow would mediate the relationship between GFH and SWB.

* SH and mindfulness would mediate the relationship between SH and SWB.

2.3 Method

2.3.1 Design

This study was a cross sectional, online, internet study.

2.3.2 Participants

There were 113 consenters, of which three provided only demographic data and a further 12 provided partial data sets. Only those who completed all measures were included in the analysis. The total sample (N=98) was sufficient to detect medium effects at a power of .80 with an alpha of .05. The sample comprised of 75 females and 23 males, and 74 university staff members and 24 university students. The mean age was 39 years old (SD 11. 83), with ages ranging from 18 to 65.

2.3.3 Measures

The following measures were administered via an online self-report questionnaire:

Goal-focused hope was measured using The Hope Scale (Snyder et al., 1991). This is a 12-item measure designed to assess trait goal-focused hope. Each item is rated on an 8-point Likert scale ranging from 1 (*definitely false*) to 8 (*definitely true*). The total score range is 12 to 96. Snyder et al. (1991) reported a mean normative score of 51.28, good internal reliability and test-retest reliability (.87 and .85 respectively). Within this study the Cronbach's alpha was .91.

Spiritual hope was assessed using a 14-item subscale of the Comprehensive Hope Scale-trait version (Scioli, Ricci, Nyugen, Biller, & Scioli, 2011). The full CHS has 56 items, 28 of which measure spiritual hope. The authors of the measure developed two 14 item split-half versions of the spiritual hope scale. Version A was used in this study as it demonstrated slightly higher alpha values. In personal communication, the authors of the spiritual hope scale provided statistics demonstrating very good analysis of equivalence for the split-half SH scale with the full SH scale (r = .94), and good internal reliability (r = .89). Each item is rated on a 4-point Likert scale ranging from 0 (*not me*) to 3 (*exactly like me*), with some items reverse scored (e.g. "I have never felt close to any kind of spiritual force or presence"). Possible total scores range from 0 to 42. The present study showed a Cronbach's alpha of .92.

Flow was measured with the Dispositional Flow Scale (DFS) (Jackson & Marsh, 2006), derived from the Flow State Scale (Jackson & Eklund, 2002). This scale assesses how an individual generally feels when they partake in their nominated activity. Nine dimensions of flow are measured using 36 items. Each dimension score is made up of four items, which are totalled and an average dimension score generated. A total flow score is obtained by summing the item-average dimension scores. Each item is rated on a Likert scale from 1 (*never)* to 5 *(always)* creating a total score range from 9 to 45. Via personal communication

with the authors of the measure the instructions were amended to include a brief description of flow. The scale has been shown to have robust internal consistency (.85; Jackson & Eklund, 2002). In the present study the Cronbach's alpha was .93.

Mindfulness was assessed using the Five Facet Mindfulness Questionnaire (FFMQ) (Baer et al., 2008). The FFMQ was derived from a factor analysis of trait mindfulness measures. It consists of 39 items assessing five facets of mindfulness (observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity). Each item is rated on a Likert scale ranging from 1 (*never/rarely true*) to 5 (*very/often true*). The facets within the FFMQ have been shown to have good internal consistency (.72 - .92; Baer, Smith, Hopkins, Krietemeyer & Toney, 2006). Typically, the subscales of the FFMQ are not summed to create a single score. However, as one mindfulness score was needed for the mediation analysis a sum score was calculated, similar to that used by Carmody and Baer (2008) and the same scoring system as used by Gard et al. (2012). Using this system there was a total score range of 39 to 195. The Cronbach's alpha for this measure within this study was .94.

Positive and Negative Affect was measured using the Positive and Negative Affect Scale (PANAS) (Watson, Clark & Tellegen, 1988). The PANAS consists of two 10-item scales (PA and NA). Each item is rated on a 5-point Likert scale from 1 (*very slightly)* to 5 (*extremely),* with scores ranging from 10 to 50 for each scale. Both scales have good internal consistency (.84 - .90; Watson et al., 1988). Within this study both scales had good internal consistency (PA .91, NA .90).

Life satisfaction was assessed using the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). The SWLS is a five-item measure widely used to assess subjective satisfaction with life. Each item is rated on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) with possible scores from 5 to 35. The scale has

good internal reliability (.83; Pavot, Diener, Colvin & Sandvik, 1991) test-retest reliability (.82; Diener et al., 1985). In the present study Cronbach's alpha was .86.

Face and content validity of all measures were assessed by the author by thoroughly examining the items within each measure to ascertain whether they appeared to measure the appropriate construct and were assessing all elements of each construct. The authors of the measures demonstrated good construct, convergent and discriminant validity with expected constructs. As with most questionnaires ecological validity was limited.

All measures are included in appendices B-G.

2.3.4 Procedure

The study consisted of an online self-report questionnaire investigation at a large university in the UK. The sample was recruited using the University's intranet service, which informed staff and students of the study.

After gaining institutional and ethical approval (see appendix H), the study was made available and advertised through the university's announcement service. The link took potential participants to a web-link with information about the study and a consent page (see appendices I and J). Prior to starting the questionnaires basic demographic information was obtained (gender, age and staff/ student status). The questionnaire took approximately 30 minutes to complete. Written instructions were provided with each measure and they were presented in the following order: SWB measures (positive affect and negative affect, followed by satisfaction with life), spiritual hope, goal-focused hope, flow, and mindfulness. The order of presentation deliberately did not replicate the mediation hypotheses in case this influenced responses (i.e. if a relationship existed from goal-focused hope to flow to SWB, ordering the measures in this way may have alerted the participant to this and affected their responses). The flow measure ended the questionnaire as it was thought to be a positive ending.

An online questionnaire was selected to collect data as online studies have been found to be as reliable as other forms of data collection (e.g. Granello & Wheaton, 2004). Computer based methods of data collection have become increasingly popular due to faster test results and no data entry costs due to the instant computation and transformation of data (Schmitz et al., 1999).

All data were anonymised. Once received, data were converted and transferred to SPSS Statistical Package (version 20) for subsequent analysis. Data were collected, stored, and transferred in line with the policies of the university in which the study took place.

2.4 Results

Data screening revealed that goal-focused hope, spiritual hope, and negative affect were significantly skewed (*z*-scores > 2.58). Following log transformations these variables were normally distributed (all *z*s < 2.58) (Field, 2005). However, untransformed scores are presented in the Table 1 for ease of interpretation. See appendix K for more details on data screening.

Mean descriptive statistics for the key study variables are summarised in Table 1. There were no significant differences found between male and female participants in terms of age, GFH, SH, flow, mindfulness, SWLS, and PA (all *p*s >.05). However, females reported significantly higher levels of NA (M = 22.07, SD = 8.05) than did males (M = 18.26, SD = 5.54): t (96) = -2.57, p = .01). There were no significant differences between staff and students except, as expected, students were significantly younger (M = 30, SD = 9.32) than staff (M = 42, SD = 11.07): t (96) = 5.24, p =.001.

2.4.1 Descriptive statistics

Table 1

Means, standard deviations (SD) and score ranges for GFH, SH, flow, mindfulness, PA, NA, and SWLS

Variables	*Means*	*SDs*	*Score Range*
GFH	47.12	9.68	19 - 62
SH	14.94	9.75	0 - 41
Flow	32.89	4.18	23 - 43
Mindfulness	123.86	21.14	60 - 184
PA	32.30	7.34	11 - 47
NA	21.17	7.68	10 - 42
SWLS	22.77	6.35	9 - 35

Note. GFH = Goal Focused Hope, SH = Spiritual Hope, PA = Positive Affect, NA = Negative Affect, SWLS = Satisfaction With Life Scale; Raw data were used (i.e. untransformed) as provided more meaningful means for the reader.

2.4.2 Correlations between main study variables

Table 2 presents correlations between the study variables. There were no significant correlations between age and the study variables. GFH and SH were modestly correlated with each other. GFH was significantly correlated with all measures of SWB. In contrast, SH was not correlated with any measures of SWB (all *p*s > .05). Flow was significantly modestly associated with measured of SWB and mindfulness was significantly moderately associated with measures of SWB. As expected, GFH and flow were modestly significantly positively correlated with each other, as were SH and mindfulness. GFH and mindfulness were moderately significantly positively correlated with each other.

Table 2

Pearson's correlations between study variables

Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1. Age	1.00							
2. SH	-.05	1.00						
3. M'ness	.09	**.20***	1.00					
4. GFH	-.16	**.21***	**.64 ** **	1.00				
5. Flow	.01	.05	**.23***	**.27****	1.00			
6. PA	-.08	.10	**.57****	**.70****	**.21***	1.00		
7. NA	.02	-.02	**-.53****	**-.53****	**-.31****	**-.50****	1.00	
8. SWLS	-.15	.05	**.45****	**.65****	**.26****	**.59****	**-.55****	1.00

Note. GFH = Goal Focused Hope, SH = Spiritual Hope, M'ness = Mindfulness, PA = Positive Affect, NA = Negative Affect, SWLS = Satisfaction With Life Scale

* p <.05, ** p <.01.

2.4.3 Predictors of SWB

To test whether flow and mindfulness mediate or indirectly affect the relationship between GFH and SWB and SH and SWB, mediational analyses were performed, respectively. As a further development of Baron and Kenny's (1986) mediational model, Preacher and Hayes (2008) posit that a direct effect of the predictor variables (GFH and SH) on the outcome variable (i.e. SWB) is not needed to test for mediators. This is the mediation model that has been used for this analysis.

2.4.4 Multiple regression/ mediation analysis relating to GFH, flow and SWB

First, in keeping with Preacher and Hayes (2008), simple regressions were performed to establish the predictive relationships between GFH and flow, and flow and measures of SWB (positive affect, negative affect and satisfaction with life). Results showed that GFH significantly predicted flow and accounted for 7% of the variance (ΔF (96) = 7.36, p <.01). Results showed that flow predicted all three measures of SWB. Flow accounted for 5% of the variance in PA (ΔF (96) = 4.61, p <.05), 9% in NA (ΔF (96) = 9.97, p <.01) and 7% in SWLS (ΔF (96) = 6.91, p <.01).

Next, we tested whether flow mediated the relationship between GFH and SWB using multiple hierarchical regression for each SWB dependent variable (PA, NA and SWLS). Independent variables were entered in each hierarchical regression: Step 1 tested the effect of demographic variables (age, gender and staff/ student status), on SWB (PA, NA and SWLS). As can be seen in Table 3, gender was a significant predictor of NA (p < .05) but there were no other significant demographic predictors of the SWB variables (all ps > .05). In step 2, GFH was entered as a predictor variable. Gender no longer remained a significant predictor of NA (p > .05). GFH was a significant predictor of all measures of SWB (all ps < .001). In step 3, flow was added to the model but did not predict any measures of SWB (PA, NA and SWLS, all ps >.05). GFH remained a significant predictor of all SWB measures (PA, NA, SWLS, all ps < .001). These results suggest that flow did not operate as a mediator between GFH and SWB (PA, NA, SWLS).

Table 3

Hierarchical multiple regression analyses predicting PA, NA and SWLS from GFH and flow

	Predictor variables	Standardised Coefficient β			Confidence Interval						Model Summary ΔR^2		
		PA	NA	SWLS	PA		NA		SWLS		PA	NA	SWLS
					L	U	L	U	L	U			
Step	Age	-.05	-.01	-.08	-.17	.11	-.01	.01	-.16	.08	.03	.05	.04
1	Gender	-.12	**.20***	.04	-5.51	1.47	.01	.14	-2.42	3.58			
	Staff/ student	.09	-.09	.15	-2.36	5.29	-.11	.04	-1.10	5.46			
Step	Age	.03	-.07	-.01	-.08	.12	-.01	.01	-.10	.09	**.50****	**.31****	**.43****
2	Gender	-.06	.15	.10	-3.49	1.57	-.01	.11	-.92	3.74			
	Staff/ student	-.01	-.03	.07	-2.83	2.72	-.07	.06	-1.58	3.54			
	GFH	**.70****	**-.53****	**.64****	15.36	23.63	-.38	-.19	11.52	19.15			
Step	Age	.03	-.07	-.01	-.08	.12	-.01	.01	-.10	.09	.50	.34	.44
3	Gender	-.05	.13	.11	-3.48	1.65	-.01	.10	-.71	3.97			
	Staff/ student	-.01	-.03	.07	-2.84	2.75	-.07	.05	-1.52	3.58			
	GFH	**.70****	**-.49****	**.61****	15.04	23.66	-.36	-.17	10.70	18.56			
	Flow	.02	-.16	.11	-.24	.30	-.01	.01	-.08	.42			

Note. GFH = Goal Focused Hope, PA = Positive Affect, NA = Negative Affect, SWLS = Satisfaction With Life Scale; U = upper, L = lower

* p <.05, ** p < .001.

2.4.5 Multiple regression/ mediation analysis relating to SH, mindfulness and SWB

For the second set of mediation analyses, following the same procedure as the first (Preacher & Hayes, 2008), simple regressions were performed to establish the predictive relationships between SH and mindfulness, and mindfulness and measures of SWB. Results showed that SH significantly predicted mindfulness and accounted for 4% of the variance (ΔF (96) = 4.18, p <.05). Results demonstrated that mindfulness significantly predicted all three measures of SWB. Mindfulness accounted for 32% of the variance in PA (ΔF (96) =45.96, p <.001), 28% in NA (ΔF (96) = 38.14, p <.001) and 21% in SWLS (ΔF (96) = 24.82, p <.001).

Next, we tested whether mindfulness mediated the relationship between SH and SWB using multiple hierarchical regression for each SWB dependent variable (PA, NA and SWLS). Independent variables were entered in each hierarchical regression: Step 1 tested the effect of demographic variables (age, gender and staff/ student status), on SWB (PA, NA and SWLS). As can be seen in Table 4, gender was a significant predictor of NA ($p < .05$) but there were no other significant demographic predictors of the SWB variables (all ps > .05). In step 2, SH was entered as a predictor variable. Gender remained a significant predictor of NA ($p < .05$) but there were no other significant demographic predictors (all ps > .05). SH did not significantly predict any measures of SWB (all ps > .05). In step 3, mindfulness was added to the model and significantly predicted all measures of SWB (PA, NA and SWLS). There were no other significant predictors (all ps > .05), as can be seen in Table 4. Given the relationship between SH and mindfulness, these results suggest that SH has an indirect effect on SWB (PA, NA, SWLS) via mindfulness.

Table 4

Hierarchical multiple regression analyses predicting PA, NA and SWLS from SH and mindfulness

	Predictor Variables	Standardised Coefficient β			Confidence Intervals						Model Summary ΔR^2		
		PA	NA	SWLS	PA		NA		SWLS		PA	NA	SWLS
					L	U	L	U	L	U			
Step 1	Age	-.05	.01	-.08	-.17	.11	-.01	.01	-.16	.08	.03	.05	.04
	Gender	-.12	**.20***	.04	-5.51	1.47	.01	.14	-2.42	3.58			
	Staff/ student	.09	-.09	.15	-2.36	5.29	-.11	.04	-1.10	5.46			
Step 2	Age	-.04	.02	-.08	-.17	.11	-.01	.01	-.16	.08	.04	.05	.04
	Gender	-.12	**.20***	.04	-5.49	1.49	.01	.14	-2.43	3.60			
	Staff/ student	.09	-.09	.15	-2.38	5.27	-.11	.04	-1.13	5.47			
	SH	.10	-.02	.05	-2.74	7.72	-.11	.09	-3.49	5.52			
Step 3	Age	-.10	.03	-.12	-.18	.06	-.01	.01	-.17	.04	**.35****	**.31****	**.28****
	Gender	-.01	.10	.13	-3.11	2.78	-.03	.09	-.72	4.64			
	Staff/ student	.08	-.09	.14	-1.80	4.54	-.09	.03	-.77	5.00			
	SH	-.02	.09	-.06	-5.05	3.81	-.04	.14	-5.35	2.72			
	Mindfulness	**.58****	**-.54****	**.50****	.14	.26	-.01	-.01	.10	.21			

Note. SH = Spiritual Hope, M'ness = Mindfulness, PA = Positive Affect, NA = Negative Affect, SWLS = Satisfaction With Life Scale; U = upper, L = lower; * p <.05, ** p <.001.

2.5 Discussion

This study aimed to examine the relationships between goal-focused hope, spiritual hope, flow, mindfulness and subjective well-being (SWB). GFH and SH were associated with each other. As predicted GFH was significantly related with all measures of SWB but, counter to prediction, SH was not significantly related to any measures of SWB. As predicted, flow and mindfulness were significantly associated with all measures of SWB. As predicted GFH and flow were associated, as were SH and mindfulness. Unexpectedly, GFH and mindfulness were strongly correlated with each other. Mediational analyses unexpectedly showed that flow did not mediate the relationship between GFH and SWB. As expected, SH had an indirect relationship with measures of SWB via mindfulness. Correlational and regression analyses were used to address the research aims and hypotheses and the results of these analyses are now discussed.

2.5.1 Correlational findings

That a relatively small association was found between GFH and SH suggests that though distinct types of hope, they are related to each other. It may be that if an individual has either hope (e.g. goal-focused hope), that this makes them more of a hopeful person generally and so more likely to experience other types of hope (i.e. spiritual hope). This association may also point to the existence of a broader hope disposition, which is related to all types of hope. That GFH was associated with all measures of SWB provides further support for the premise that GFH is important to SWB. Those with GFH, due to their belief in their ability to achieve their goals, may be more resilient in the face of life challenges and able to remain positive, which enhances SWB. The clear relationship between GFH and SWB provides support for research in the area of hope as it is important to understand the mechanisms of action for a construct that is so clearly associated with SWB. In contrast, a lack of association between SH and measures of SWB was found. At face value this may

reflect SH having no bearing at all on SWB, though this seems unlikely. In previous studies examining SH and SWB the relationship was found to be a complicated one (e.g. Unwin & Dickson, 2010). It may be that the lack of direct association between SH and SWB is due to a third variable. One interpretation could be that SH leads to certain experiences that in turn, enhance SWB, in which case no direct relationship between SH and SWB would be observed.

Flow was associated with all measures of SWB. Flow is described as an optimal human experience that is enjoyable (Csikszentmihalyi, 1991). The results suggest that experiencing this optimal state leads to increased satisfaction with your life, more positive affective evaluations and reduced negative evaluations. It may be that experiencing flow is both protective against negative affect by providing something to look forward to, and enhances positive affect through the enjoyable experience itself. That mindfulness was associated with measures of SWB, replicates previous research (e.g. Carmody & Baer, 2007) and supports the view that this construct is important to SWB. Though causality is difficult to infer due to correlational analysis, one interpretation is that the experience of mindfulness increases individual's affective and cognitive evaluations of their life. Alternatively, it may be the case that high SWB means an individual is more present and grounded in their life and so more likely to experience mindfulness. It seems likely that the relationship is bi-directional.

The association between GFH and flow may be due to goal-focused hope providing the belief that you can achieve what you set out to do, making an individual more likely to engage in an activity which they can experience flow in (i.e. thoughts triggering behaviours). Conversely, experiencing flow and moving towards one's goal may provide positive feedback and affect, which enhances goal-focused hope (i.e. behaviours and feelings leading to thoughts). Similarly, that SH and mindfulness were associated with each other, though a

relatively small effect size, suggests that these constructs are related. It may be that spiritual hope creates a cognitive context in which mindfulness is more likely to be experienced. For example, by facilitating an acceptance of reality, which is a core facet of mindfulness. In contrast, it may be that the experience of mindfulness connects the individual to their lives in a more meaningful way and so enhances spiritual hope (i.e. behaviour leading to thoughts).

The relationship between mindfulness and flow was unexpected. However, an explanation could be that mindfulness forms part of the preparatory conditions for flow. For example, by practicing mindfulness an individual begins to clear their mind and develop a sense of acceptance of the present moment. This equanimity may facilitate the focusing of attention on the task at hand and making a realistic appraisal of their ability, thus increasing the likelihood of experiencing flow.

That the strongest association was between GFH and mindfulness was unexpected. It may be that GFH is part of optimal preparatory conditions for mindfulness, so increased GFH means mindful experiences are more likely to occur. However, as mindfulness is a goal-less process, this seems counter intuitive. Alternatively, mindfulness may increase GFH by creating a sense of calm and clarity, which increases the likelihood of setting attainable goals and enhances problem solving skills in the pursuit of goals. This clarity and realism increases the chances of achieving goals, thus enhancing GFH. As expected, SH and flow were not associated and suggests these constructs are independent of one another. That is, that an individual's SH does not affect the likelihood that they will experience flow, and that the experience of flow has no bearing upon SH.

2.5.2 Mediational findings in relation to GFH, flow and SWB

That flow did not mediate the relationship between GFH and SWB suggests GFH has a direct relationship with all measures of SWB independent of flow. Possible interpretations of a relationship between GFH and SWB have already been discussed (see section 2.5.1).

Although flow had a direct relationship with SWB, that flow did not predict SWB once GFH was controlled for suggests that any relationship between flow and SWB was accounted for by GFH. It may be that GFH is integral to the experience of flow and so once accounted for, no significant relationship remains between flow and SWB. Within the correlations mindfulness was more strongly associated with GFH than flow. Given this, it seems possible that rather than flow mindfulness may mediate the relationship between GFH and SWB[1], which may be an area for future work.

2.5.3 Mediational findings in relation to SH, mindfulness and SWB

As predicted a relationship was found between SH and measures of SWB via mindfulness. As a direct relationship between SH and SWB was not found, Preacher and Hayes (2008) suggest the way to refer to such a finding is that SH had an *indirect effect* on SWB via mindfulness, as opposed to mediated the relationship. An interpretation of this finding is that SH may form part of a disposition that enhances the likelihood of experiencing mindfulness. SH encompasses a sense of interconnectedness, a higher meaning to life and a positive view of the universe. It seems plausible that holding such views would be advantageous to the development and experience of mindfulness. That the relationship between SH and SWB may be a subtle one is supported by previous research that reported SH predicted SWB when in interaction with GFH (Unwin & Dickson, 2010). However, some caution needs to be exercised when interpreting this result of the current study as, although the relationship was statistically significant, the association and predictive relationships found between SH and mindfulness were modest.

[1] Given the strong positive association between GFH and mindfulness, the proposed mediation model was examined, the results of which are presented in 'Notes' at the end of the paper.

2.5.4 Mediational findings in relation to gender and NA

That a relationship was only found between gender and NA, with females scoring higher on NA, may be due to females feeling more comfortable acknowledging difficult feelings. If so, this may suggest that the varying results in relation to gender and SWB that are reported within the literature may reflect gender having a different relationship with different facets of SWB. However, it is not clear whether this is an experiential difference between the genders in terms of their actual experience of negative affect, or a reporting bias between the genders (i.e. whether females experience more NA or only report more NA). Also, as gender is related to NA mirrors findings that suggest a greater number of women suffer from depression (e.g. Beekman, Copeland & Prince, 1999).

2.5.5 Clinical implications

The clinical implications of this study pertain to those findings regarding GFH, SH, flow, mindfulness and SWB. The study sample was staff and students at a UK university. Clinical implications specific to this population will relate to mental health services offered to staff and students at the university. Given the strong association between mindfulness and measures of SWB, it may be of benefit to offer mindfulness-based courses to both staff and students of the university. This may be particularly useful during times of stress, such as around exam time. Similarly, when promoting healthy living within the university a description of flow may be used to facilitate staff and students identifying activities they may enjoy doing and benefit from, which could be put on to posters around the university. The counselling services offered to staff and students at the university may consider incorporating the findings of this study in their practice. Some possible implications as to how the counselling services may do this are now discussed within the wider context of general clinical practice. However, as this was a non-clinical sample, clinical implications should be considered tentative.

It would seem that an individual can have different levels of GFH and SH, both of which are associated with SWB in different ways. It may be advantageous for a clinician to develop a good understanding of a client's 'hope profile' as part of the assessment process by exploring both their SH and GFH. This may help to orient the clinician and client to areas of resilience that can be drawn upon during intervention, for example an individual may be ill which has reduced their GFH, however if their SH is high then this would be an area of resilience to draw upon.

The findings regarding flow are of clinical value. When working with low SWB working towards the identification of activities in which flow may be experienced could form part of the therapeutic work. For example, asking the client to recall times they have experienced flow and using this information to inform behaviour activations tasks. Further, services may offer flow-based activities within their service and community in order to raise SWB on a larger scale, such as starting running groups. Similarly, this study has demonstrated that mindfulness is protective as it appears to enhance SWB. Clinicians working with people with low SWB may want to consider mindfulness as an intervention that will facilitate the client viewing their life in a more positive way.

In terms of identifying whether to use flow or mindfulness with a client, it may be that a person's hope profile could inform this process. For example, if someone had high SH this may suggest mindfulness-based interventions could be encouraged, whereas if someone had high GFH this may point to flow-based interventions. However, this is a particularly tentative suggestion given the modest relationship between SH and mindfulness. Alternatively, that mindfulness and flow were associated provides a rationale for using these two constructs together to enhance SWB. For example, flow activities could be used to elevate mood to the degree that mindfulness strategies could be taught. Alternatively, mindfulness strategies

could be sued to help the individual become aware of fluctuations in their mood and so recognise times their mood improves, which may help identify potential flow activities.

Although there is a direct relationship between GFH and SWB, the results pertaining to the GFH, flow and SWB mediation hypothesis were counter to prediction and their clinical implications not so clear. It is possible that more detailed research is needed. Investigating the measures used to assess these constructs would be of use, for example, examining the items for each measure to ascertain whether the GFH measure also assesses flow. Exploring GFH in relation to the nine dimensions of flow separately could be illuminating. It seems possible that the challenge-skill balance dimension of flow, which assesses belief and confidence in our ability to succeed in a given situation, may be particularly associated with GFH. That GFH accounted for such a lot of the variance of SWB reinforces the need for assessing hope clinically by accessing client's goals and enhancing self-efficacy.

Though the effect was modest, that SH has a relationship with SWB via mindfulness reinforces the importance of spirituality to well-being and mental health. Within secular organisations such as the NHS there can be an ambivalence regarding the explicit acknowledgement and exploration of spirituality. Though the relationship is indirect, that SH is related to SWB suggests this may be a construct that could be attended to clinically. This could be achieved through discussing it within therapy and using it as a basis to explore potential interventions.

2.5.6 Future research

Given the need for cautious interpretation of some of the results, replication studies are needed with both non-clinical and clinical populations to more fully understand the relationships between GFH, SH, flow, mindfulness, and SWB. More research is needed to explore the relationship between GFH and flow and SWB, and to ascertain whether mindfulness mediates the relationship between SH and SWB. As this study was conducted

with a student/ staff sample, the relationship may be different in other non-clinical and clinical populations.

If the indirect relationship between SH and SWB via mindfulness was replicated in other non-clinical and clinical samples, it may be of interest to take measures of SH prior to mindfulness-based intervention programs and explore whether SH is associated with progress and outcomes for mindfulness-based interventions. Based on the results of this study, though modest, one may predict that those higher on SH may progress better on mindfulness-based interventions. If this were found, it may provide a rationale for including SH within the assessment process for such interventions.

Some methodological considerations deserve comment. Although this study was adequately powered, there are limitations with the sample. The participants were self-selecting via a university announcement system. As such, they may be demographically different to the general population, and certainly from a clinical population. Far more females than males took part in the study, which may have biased the results. The purpose of this study was to test theoretically derived hypotheses. Further studies may build upon this by testing the proposed models with non-clinical and clinical populations within clinical settings and other non-clinical settings.

In summary, based on a review of relevant literature this study aimed to develop an understanding of the relationships between GFH, SH, flow, mindfulness and SWB. GFH and SH were associated with each other, though appear to be relatively distinct forms of hope with different relationships with other study variables. Associations were found between GFH, flow and mindfulness and all measures of SWB, providing further empirical evidence for the importance of these constructs to SWB and a rationale for their use clinically. In contrast, SH had no direct association with measures of SWB. GFH and flow were associated, possibly due to the importance of goals to both constructs. SH and mindfulness

were also associated with each other, which may be due to the importance of spirituality to both constructs. A strong association was found between GFH and mindfulness, which may illustrate that GFH enhances mindfulness, or that the experience of mindfulness increases GFH. The results demonstrated that GFH and SH are associated with SWB in different ways. GFH has a direct relationship with SWB, whereas a relationship exists between SH and SWB via mindfulness, though this was a modest finding. In contrast, flow was not found to mediate the relationship between GFH and SWB. These preliminary findings have potential implications for both clinical and research settings. This study awaits replication to investigate whether the same relationships are found within different populations.

2.6 Acknowledgments

This study was supported financially by the Doctorate in Clinical Psychology programme at the University of Liverpool. The author would like to thank all of the participants for taking part in the study.

2.7 Notes

1 - Due to the strong association between GFH and mindfulness we conducted a further multiple hierarchical regression, this time examining whether mindfulness mediated the relationship between GFH and measures of SWB. First, in keeping with Preacher and Hayes (2008), simple regressions were performed to establish the predictive relationships between GFH and mindfulness and mindfulness and measures of SWB (positive affect, negative affect and satisfaction with life). Results showed that GFH significantly predicted mindfulness and accounted for 40% of the variance (ΔF (96) = 67.30, p <.001). As previously reported, mindfulness significantly predicted all three measures of SWB. Steps 1 and 2 of the regression were the same as those reported for the GFH – flow – SWB regression analysis. However, in step 3, mindfulness (instead of flow) was added to the model and significantly predicted PA (p <.05) and NA (P <.01) but did not significantly predict SWLS (p >.05). Though GFH remained a significant predictor of all measures of SWB after accounting for mindfulness (all ps < .001), the beta values reduced for PA and NA once mindfulness was entered into

the model. Given the relationship between GFH and mindfulness, these results suggest that the relationship between GFH and PA and GFH and NA is partially mediated by mindfulness.

See appendix L for a table of these results.

2.8 References

Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice, 10,* 125-143.

Baer, R. A. (2008). Construct validity of the Five Facet Mindfulness Questionnaire in meditating and non-meditating samples. *Assessment, 15*(3), 329-342.

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13,* 27–45.

Baer, R. A., Smith, G., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., Walsh, E., Duggan, D., & Williams, J. (2008). Construct validity of the five facet mindfulness questionnaire in meditating and non-meditating samples. *Assessment, 15*(3), 329-342.

Baron, R., & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Beekman, A., Copeland, J., & Prince, M. (1999). Review of community prevalence of depression in later life. *The British Journal of Psychiatry, 174,* 307-311.

Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. C., Carmody, J., Segal, Z., Abbey, S., Speca,M., Velting, D., & Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice, 11,* 230-241.

Brown, K., & Ryan, R. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84*(4), 822-848.

Carmody, J., & Baer, R. A. (2007). Relationships between mindfulness practice and levels of mindfulness, medical and psychological symptoms and well-being in a mindfulness-based stress reduction program. *Journal of Behavioural Medicine, 31,* 23-33.

Csikszentmihalyi, M. (1991). *Flow: the psychology of optimal experience*. Harper Perennial: Modern Classics.

Csikszentmihalyi, M., & Mei-Ha Wong, M. (1991). Affiliation motivation and daily experience: some issues on gender differences. *Journal of Personality and Social Psychology, 60*(1), 154-164.

Csikszentmihalyi, M., & Nakmura, J. (2010). Effortless attention in everyday life: A systematic phenomenology. In B. Bruya (Ed.). *Effortless attention: A new perspective in the cognitive science of attention and action* (pp. 179-190). Cambridge, MA: The MIT Press.

Diener, E., Emmons, R. A., Larsen, R., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49,* 71-75.

Diener, E., Lucas, R., & Oishi, S. (2002). Subjective well-being: The science of happiness and life satisfaction. In Snyder, C. & Lopez, S. (Eds.), *The handbook of positive psychology* (pp. 63 – 73). Oxford: Oxford University Press.

Diener, E., Suh, E. M., Lucas R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125*, 276-302.

Field, A. (2005). *Discovering statistics using SPSS* (2nd ed.). Sage: London.

Fritz. B., & Avsec, A. (2007). The experience of flow and subjective well-being of music students. *Horizons of Psychology, 16*(2), 5-17.

Gard, T., Brach, N., Hölzel, B., Noggle, J., Conboy, L., & Lazar, S. (2012). Effects of a yoga-based intervention for young adults on quality of life and perceived stress: The potential mediating roles of mindfulness and self-compassion. *The Journal of Positive Psychology, 7*(3), 165-175.

Granello, D., & Wheaton, J. (2004). Online data collection: Strategies for research. *Journal of Counselling and Development, 82,* 387-393.

Jackson, S.A., & Eklund, R. C. (2002). Assessing flow in physical activity: The FSS-2 and DFS-2. *Journal of Sport & Exercise Psychology, 24,* 133 – 150.

Jackson, S. A., Kimiecik, J., Ford, S., & Marsh, H. W. (1998). Psychological correlates of flow in sport. *Journal of Sport & Exercise Psychology, 20,* 358 – 378.

Jackson, S., & Marsh, H. (2006). Development and validation of a scale to measure optimal experience: The Flow State Scale. *Journal of Sport & Exercise Psychology, 18,* 17-35.

Kabat-Zinn, J. (1994). *Wherever you go, there you are: Mindfulness mediation in everyday life.* New York: Hyperion.

Keyes, C., & Magyar-Moe, J. (2003). The measurement of utility of adult subjective well-being. In Lopez, S. & Snyder, C. (2003). *Positive psychological assessment* (pp. 411-425). Washington, DC: American Psychological Association.

Kornfield, J. (1993). *A path with heart.* New York: Bantam Books.

Ostir, G., Markides, K., Black, S., & Goodwin, J. (2000). Emotional well-being predicts subsequent functional independence and survival. *Journal of the American Geriatrics Society, 48,* 473-478.

Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. *Psychological Assessment, 5,* 164-172

Pavot, W. G., Diener, E., Colvin, C. R., & Sandvik, E. (1991). Further validation of the Satisfaction with Life Scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment, 57,* 149-161.

Preacher, K., & Hayes, A. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects on multiple mediator models. *Behaviour Research Methods, 40*(3), 879-891.

Scioli, A. (2007). Hope and spirituality in the age of anxiety. In R.J. Estes (Eds.), *Advancing quality of life in a turbulent world* (pp. 135-150). New York: Springer.

Scioli, A., Ricci, M., Nyugen, T., Biller, H. B., & Scioli, E. R. (2011). Hope: Its nature and measurement. *Psychology of Religion and Spirituality, 3*(2), 78-97.

Seligman, M. (2002). *Authentic happiness: Using the new positive psychology to utilize your potential for lasting fulfilment*. New York: Free Press.

Sheldon, K., & Lyubomirsky, S. (2004). Achieving sustainable new happiness: prospects, practices and prescriptions. In Linley, P. & Joseph, S. (Eds.), *Positive Psychology in Practice* (pp. 127-145). Hoboken, NJ: Wiley.

Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry, 13*(4), 249-275.

Snyder, C. R., Harris, C., Anderson, J.R., Holleran, S. A., Irving, L. M., & Sigman, S. T. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*(4), 570-585.

Unwin, J., & Dickson, M. (2010). Goal focused hope, spiritual hope, and well-being. *Research in the Social Scientific Study of Religion, 21*, 161 – 174.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology, 47,* 1063–1070.

CHAPTER 3: CONCLUDING DISCUSSION

This concluding chapter of the thesis contains three sections. The first section offers an expanded discussion, which begins with a general overview of the work carried out and the results of the study. Following this possible interpretations of key findings are discussed related to relevant literature. A critique of methodological considerations relevant to this study is then provided and this section concludes with further discussion of clinical implications of the study.

The purpose of the second section is to provide a summary of the study in a format that is accessible to the target audience (i.e. staff and students at a UK university). The summary is written in a way that could be published within a university magazine, for this reason attention has been paid to the language used. The intention is that the summary is engaging and communicates the key results in a manner suitable to the target audience.

In the final section of this chapter possible directions for future research will be addressed. This will begin by discussing broad future directions for research and move on to providing an outline for a specific piece of work that would extend the work done thus far.

3.1 General Overview

Research has identified that internal psychological factors and processes are more significant to SWB than external factors (e.g. Diener, 2012). The empirical literature identified hope as a cognitive process that is known to underlie SWB (e.g. Snyder, 2002). Two types of hope have been identified in the literature, which are goal-focused hope (Snyder, 2002) and spiritual hope (Scioli, Ricci, Nyugen & Scioli, 2011). What is less clear is how hope impacts upon SWB. One possibility is that hope gives rise to certain experiences that enhance SWB. Flow is described as state of high attention to a current task, coupled with a sense of automaticity, which enhances SWB as it is enjoyable (Csikszentmihalyi &

Nakmura, 2010). Mindfulness is a quality of consciousness with clarity and vividness, where one openly accepts whatever enters experience, bringing with it a sense of contentedness (amongst other things), which increases SWB (Brown & Ryan, 2003). The literature demonstrates that goals are integral to both goal-focused hope (Snyder et al., 1991) and flow (Csikszentmuhalyi, 1991) and so these two constructs may be associated. Similarly, spirituality is identified as being important to both spiritual hope (Scioli et al., 2011) and mindfulness (e.g. Hayes, 2004), suggesting these two constructs may be associated.

The study aim was to examine the relationships between goal-focused hope, spiritual hope, flow, mindfulness and subjective well-being (SWB). The study design was cross-sectional, with 98 staff and students at a university completing measures of the study variables via an online questionnaire. Well-known self-report measures were used to assess goal-focused hope (Snyder et al., 1991), spiritual hope (Scioli et al., 2011), flow (Jackson & Marsh, 2006), mindfulness (Baer et al., 2008), and SWB (Watson, Clark & Tellegen, 1988; Diener, Emmons, Larsen, & Griffin, 1985).

The study predictions were that goal-focused hope, spiritual hope, flow and mindfulness would be associated with measures of SWB; that goal-focused hope and flow would be associated with each other, as would spiritual hope and mindfulness. Based upon cognitive models (e.g. Wells, 1997) in which cognition (i.e. goal-focused hope and spiritual hope) leads to behaviours (i.e. flow and mindfulness) and emotions (i.e. SWB), it was predicted that flow would mediate the relationship between goal-focused hope and SWB; and similarly, that mindfulness would mediate the relationship between spiritual hope and SWB. Correlational and multiple hierarchical regression analyses were employed to examine these hypotheses.

As predicted, the results demonstrated that goal-focused hope was associated with all measures of SWB. However, spiritual hope was not associated with any measures of SWB.

As expected goal-focused hope and flow, and spiritual hope and mindfulness, were positively associated with each other. As hypothesised, flow and mindfulness were associated with all measures of SWB, and were also positively associated with each other. Unexpectedly, goal-focused hope and mindfulness were strongly positively associated. Flow was not found to mediate the relationship between goal-focused hope and SWB. In contrast, regression analyses supported the prediction that spiritual hope had an indirect relationship with measures of SWB via mindfulness, though the effect was small.

That goal-focused hope was related to all measures of SWB and spiritual hope was related to no measures of SWB is an interesting finding that warrants further discussion. One interpretation may be that goal-focused hope is important to SWB and spiritual hope is unimportant to SWB, however, this seems unlikely. The consistent relationship between goal-focused hope and measures of SWB replicates previous research (e.g. Snyder et al., 1991). The lack of direct relationship between spiritual hope and SWB is similar to the findings of the only other study in this area, which found spiritual hope only had a relationship with SWB when goal-focused hope was low (Unwin & Dickson, 2010).

These results indicate a difference in the properties of the two types of hope. Goal-focused hope is clearer to define and anchored in tangible 'real-life' factors (e.g. the belief you may get a job or the belief you may have a relationship). This may make goal-focused hope more of a concrete cognitive belief system, and as such has clearer relationships with other factors, such as behaviours and feelings. In contrast, spiritual hope is less tangible, attempting to capture beliefs and cognitions that are existential and philosophical in nature (e.g. the belief in a power beyond oneself), which makes this a broader and more abstract belief system, which may lack specificity. Consequently, an indirect, more complex, and subtle relationship exists between spiritual hope and SWB. The direct relationship found

between goal-focused hope and SWB, and the indirect relationship found between spiritual hope and SWB, may be reflective of these different properties.

This study contributes to hope theory by both developing an understanding of the relationship between hope and SWB, and offering an opportunity to gain specificity in terms of possible mechanisms from hope to SWB. The literature around spiritual hope is new and as such research examining the relationship between this construct and others is preliminary. However, this study suggests that spiritual hope is a construct that should be considered by future researchers within the area of hope and SWB. Interesting theoretical questions are raised from this study, such as, would goal-focused hope have such a strong relationship with SWB in different cultures, such as a non-Westernised society? Similarly, would spiritual hope have a more direct relationship with SWB in an Eastern society?

Although flow and mindfulness are both established human experiences within their relevant fields, these constructs have not been looked at together in detail. This may be as the concept of flow sits largely within the field of positive psychology, whereas mindfulness sits within a more clinical framework, though is increasingly referred to within positive psychology. This study provides a relatively novel opportunity in which to examine these two constructs together. Attention and focus are important to both flow (Csikszentmuhalyi, 1991) and mindfulness (Kabat-Zinn, 1994). A possible explanation for the relatively small association found between flow and mindfulness may be that, although most likely relatively independent experiences, these constructs share some degree of overlap. As tentatively suggested in chapter one, one interpretation of this association is that flow and mindfulness fall along a continuum of focus, rather than being completely independent constructs. One could envisage that flow falls at one end of this continuum of focus, with awareness absolutely focused on the current activity to the degree that other information, such as the passing of time, is lost. In contrast, mindfulness falls at the other end of the continuum, with a

broad spectrum of focus, encompassing all of experience within a moment. This offers a development of current theory regarding these two constructs by offering a conceptualisation in which both experiences may fall a long a dimension of focus and awareness.

The strong association between goal-focused hope and mindfulness was a novel finding, no previous research has observed this relationship. Intuitively, one would not expect goals, and so goal-focused hope, to be associated with mindfulness as mindfulness is described as goal-less (Kabat-Zinn, 1994). If replicable, this may provide important implications for the on-going theoretical development of these constructs. It raises interesting theoretical questions regarding the conceptualisation and experience of mindfulness in the West. Western societies have a propensity to be individualistic and attainment driven with individual goals. Theoretically, this context may influence the conceptualisation and experience of mindfulness in Western societies. It would be of interest to consider whether this same association would be found in less individualistic, and more collective, societies. Within such societies, with less of a focus on individual goals, it seems plausible that the relationship between goal-focused hope and mindfulness may be less strong.

It was hypothesised that flow would mediate the relationship between goal-focused hope and SWB. This was based on the psychological theory that cognition (i.e. hope) gives rise to behaviours and, thus, experiences (i.e. flow) and affect (i.e. SWB) (Wells, 1997). Both goal-focused hope and flow had significant, direct relationships with all measures of SWB, replicating previous research (e.g. Snyder et al., 1991; Asakawa, 2010). This demonstrates that both cognition and behaviour influence affect. However, the effect of flow on SWB was non-significant once goal-focused hope was controlled for. This suggests the relationship between flow and SWB is accounted for by the relationship between goal-focused hope and SWB. This would suggest that, theoretically, cognition (i.e. goal-focused hope) is the stronger predictor of affect than behaviour (i.e. flow). An alternative explanation is that

experiencing flow may lead to goal-focused hope, which enhances SWB, rather than the hypothesised relationship. That is, that behaviour leads to cognitions, which then influences affect. A potential methodological explanation is that the measure used to capture flow was inadequate. Limitations of this measure were outlined in chapter one, where it was discussed whether anchoring the measure to one activity may not provide a true measure of overall flow proneness. Speculatively, the findings may have been different had a more encompassing measure of flow been available. In contrast, the relationship between spiritual hope and SWB was mediated by mindfulness. This provides a development of the theoretical understanding of spiritual hope, which is a relatively new construct first proposed by Scioli (2007). Though modest, if replicated this finding supports models which propose that cognition gives rise to behaviours and affect.

3.2 Methodological Considerations

Although this study was adequately powered, there are limitations with the sample. The participants were self-selecting via a university announcement system. This may mean they were demographically different to the general population, and certainly from a clinical population. Far more females than males took part in the study, which may have biased the results.

A strength of the study was the high response rate of those who consented to the study, with 87% of those who consented going on to provide full data sets. If non-completion reflected poorer psychological functioning or some other clinically relevant index, this may affect the capacity to generalise the results as the sample used is not totally representative of the sample that was recruited. However, comparison of those who provided a full data set and those who did not found no significant differences in age and both groups had a similar proportion of males and females. Non-completers were all members of staff, a possible

consequence of which may be that the findings are less generalisable to staff members than students.

As this was a cross-sectional design causality cannot be inferred. However, the models tested were consistent with theoretically derived hypotheses based on relevant literature. Provision of convergent evidence for these findings would be useful, for example, if similar associations were found within a longitudinal study. Following participants longitudinally may offer advantages in comparison to cross-sectional studies as causality implies a temporal sequence which can be identified with longitudinal methods (Rutter, 1994).

This study employed self-report measures to address the study aims. Each measure was selected as it was the best tool to address the research questions. However, there were limitations with the flow measure (Jackson & Marsh, 2006), which has not had test-retest analysis completed. Another possible limitation was the instructions, which ask the participant to complete the measure with one activity in mind, as a proxy for general flow proneness. However, it seems possible that an individual may have a repertoire of activities in which they experience flow, which may not be picked up with this measure. For example, one person may experience high flow in one activity, whereas another may experience flow to a lesser degree, but in multiple activities. Using the current measure, the first would be assessed as having higher flow proneness than the other. Further, the items are measured on different activities rather than one activity across all participants, which introduces individual variation. This lack of specificity may contribute to the lack of mediation between goal-focused hope and SWB via flow. It is possible that a measure that was able to capture a broader, and potentially more accurate, assessment of flow may have mediated this relationship. Limitations also exist with the FFMQ (Baer et al., 2008), which measured mindfulness. Though this measure was found to have excellent internal reliability in the

current and previous studies, test-retest reliability has not been completed on this measure to adequately assess stability. Given this is a measure of disposition it would be beneficial for this to be completed.

Lastly, based on the results of this study, it seems that more proximal questions may have been hypothesised prior to the ones addressed. The literature suggested that spiritual hope and mindfulness, and goal-focused hope and flow, were likely to be associated with each other and that this relationship was likely to influence SWB. Based on a cognitive model (e.g. Wells, 1997), it was thought that cognition (i.e. hope) was likely to be the beginning of the process, leading to behaviours (i.e. flow and mindfulness) and feelings (i.e. SWB). This provided the rationale for the directionality of the predicted mediation models (i.e. that spiritual hope would lead to mindfulness, and that goal-focused hope would lead to flow). Further, specifically for flow, the literature discusses preparatory states of which goal-focused hope may be one. However, this may not have been the case; the association could run in the opposite direction. It could be that mindfulness leads to spiritual hope and flow leads to goal-focused hope. A different analysis methodology could have examined the data for a model of best fit. For example, with a larger sample structural equation modelling (SEM) would provide a more exploratory/ interim step in examining the relationships between these constructs. However, in this study the numbers were not available to conduct such an analysis and directionality was predicted based on the available literature and established psychological models of behaviour.

3.3 Clinical Implications

This study contributes to the understanding of hope, flow, mindfulness, and SWB in general mental health. As well as understanding factors that contribute to difficulty and adversity, it is clinically relevant to understand those factors, processes, and mechanisms that contribute to resilience. Some interventions are less problem-focused and more solution-

focused and actively identify and utilise areas of strength and resilience to achieve therapeutic goals (e.g. solution-focused behaviour therapy). This study contributes to such approaches by providing insight into the relationship between different resilience constructs (e.g. goal-focused hope and spiritual hope, and flow and mindfulness) and increased understanding of the mechanisms through which hope may enhance SWB.

Within a university population the results may have specific implications. The university could run groups for staff and students in activities that are likely to lead to experiences of flow, such as running groups, art workshops, and study groups, to increase SWB. Further, a description of flow and questions that may help individuals identify flow activities could be provided, for example, via a poster or as part of well-being initiatives/ groups. As discussed briefly in chapter 2, mindfulness groups could be provided to help staff and students develop mindfulness skills. In order to make this accessible to all, and as mindfulness can be practiced anywhere, the university could make podcasts available for staff and students for personal use. It would be advantageous for the university to communicate the results of the study to staff and students, for example, via the email announcement system, a poster, or an article in a magazine. Based on SWB research, doing this as well as providing ways for staff and students to use the findings, (e.g. flow activity groups and mindfulness podcasts), would enhance the SWB of the staff and students, and so increase the productivity of the university (Oishi, 2012).

Staff and student counselling services may use the importance of hope within their clinical practice. It may be that goal-focused hope is particularly important within this population as they sit within an achievement domain (i.e. work and studying). The possible therapeutic implications discussed below are also relevant for university counselling and mental health services.

As briefly discussed in chapter 2, it seems plausible that individual's may have different hope profiles. If these results were replicated with clinical populations, it would suggest it may be beneficial for clinicians to develop a good understanding of the type of hope their client's hold and to what intensity. Understanding their hope profile in more detail may help to identify areas of strength to work with, and areas of difficulty to enhance. For example, a client low on goal-focused hope, and so possibly lacking a sense of agency, may be better worked with via setting realistic and tangible therapeutic goals so that progress can be clearly monitored; whereas an individual that has low goal-focused hope but high spiritual hope, may benefit from addressing and naming their spiritual hope within therapy, drawing attention to an area of resilience. As well as utilising the hope already experienced by the client, clinicians and services may treat fostering and instilling hope as an explicit part of the assessment, formulation, and intervention process. For example, ensuring the client group are told that there is always potential for change, thus bolstering their belief in their own capacity to change.

The association between both goal-focused hope and flow and SWB, and that goals are integral to both goal-focused hope and flow, provides a rationale for the importance of goals to our well-being. It seems that having goals is protective as long as one selects attainable goals that match our skills and we hold hope that the goals are achievable. Although a clinical sample was not used, this lends support to the premise that the development of clear and realistic therapeutic goals is advantageous in clinical settings. By encouraging clients to set feasible goals the client is more likely to achieve their goals, thus enhancing goal-focused hope and SWB. Solution-focused behaviour therapy is a therapeutic approach with a growing evidence base that privileges patient goals (see Gingerish & Peterson (2013) for a detailed review of empirical studies). It seems plausible that this approach may be particularly suited to utilising and enhancing goal-focused hope.

The final suggested clinical implication expands upon the brief point made in chapter two that, based on the significant positive correlation between both constructs, flow and mindfulness could be used together clinically. Mindfulness skills could be developed to help an individual become aware of fluctuations in their mood (Carmody & Baer, 2007). As a consequence of this, it is likely they will identify those activities they find enjoyable. These activities can then be examined, applying the conditions needed in which to experience flow (e.g. setting goals, identifying ways progress can be assessed). This process will increase their experience of flow and thus SWB (Asakawa, 2010). Similarly, it seems plausible that mindfulness techniques may be used to help gather an individual's attention in order to focus on an activity through which they experience flow. Alternatively, encouraging activities in which flow is experienced may help to enhance SWB to a degree that an individual is better able and motivated to develop mindfulness skills to further enhance SWB. It may that the individual's stronger disposition could be used to guide whereabouts to begin when using both approaches. For example, by exploring the tendency to experience mindfulness and flow and building upon whichever one they already experience. Having an understanding of flow and mindfulness, and their relationship to SWB, may facilitate clinicians identifying sub groups that are particularly high or low on both mindfulness and flow, representing resilient and vulnerable groups respectively, which will inform clinical practice and care provision and planning.

3.4 Lay Summary

The following summary is intended as a brief article to be included within a university magazine providing an overview of the study and key findings. The format is designed to be accessible to both members of staff and students at a UK university. As the audience is lay, particular attention has been paid to language used, with an attempt not to use psychological words and concepts that may not be well-known to the reader.

How does being hopeful enhance our personal well-being?

Whether a person feels hopeful or not has long been associated with whether they are satisfied with their life. Research shows that those who are more hopeful tend to evaluate their life as better and experience more pleasant emotions (e.g. joy) and less unpleasant emotions (e.g. nervousness). Two types of hope have been identified: goal-focused hope (the belief that we can achieve our goals) and spiritual hope (the belief in something beyond ourselves). An individual can experience both types of hope and have different amounts of each (i.e. one person could be high or low on both, or high on one and low on the other). What is less understood is *how* these types of hope enhance personal well-being. Two experiences associated with life satisfaction and our experience of pleasant and unpleasant emotions are flow (the experience of being completely absorbed in something you are doing) and mindfulness (the experience of being utterly aware of the present moment). The experiences of both flow and mindfulness have been found to increase life satisfaction and pleasant emotions, and decrease unpleasant emotions.

A recent study aimed to examine the relationships between goal-focused hope, spiritual hope, flow, mindfulness and personal well-being. In order to address this aim the researchers asked university students and staff to complete online measures of how generally hopeful they were, their tendency to experience flow and mindfulness, their general satisfaction with their lives, and their tendency to experience pleasant and unpleasant emotions.

People higher on goal-focused hope were found to experience more pleasant emotions, less unpleasant emotions and were more satisfied with their life. However, spiritual hope did not have a direct relationship with pleasant and unpleasant emotions, or life satisfaction. People who tended to experience more flow, and those who were disposed to being more mindful, also experienced more pleasant emotions, less unpleasant emotions and

were more satisfied with their life. An individual's goal-focused hope and tendency to experience flow, and their spiritual hope and tendency to be mindful, were positively related to each other. There were modest findings suggesting that having spiritual hope may increase your tendency to be mindful, thereby enhancing your personal well-being, though this is a new finding and needs replicating. In contrast, the relationship between goal-focused hope and personal well-being was not accounted for by the tendency to experience flow.

Although this study awaits replication, the results suggest that: staying hopeful in relation to your life goals and your place in the wider scheme of things, engaging in activities that absorb your mind to the degree you lose track of time, and lastly, staying aware of the present moment, is good for your personal well-being.

3.5 Future Research

This study was the first to examine the ways in which goal-focused hope and spiritual hope are related to SWB via the experiences of flow and mindfulness, respectively. As already discussed there were limitations with this study and methodological issues that could be addressed in future research. For example, that the sample was university staff and students limits the generalizability of the findings. Further replication studies are needed within the general population and clinical populations to more fully understand the relationships between goal-focused hope, spiritual hope, flow, mindfulness and SWB. Future research would benefit from a larger sample size as this would allow for more in-depth data analysis, such as structural equation modelling. Research that obtained the numbers to complete such analysis would allow for a more detailed model to be hypothesised and examined, which would allow unexpected findings in this study, such as the highly significant association between goal-focused hope and mindfulness, to be further investigated. Having a larger sample would allow examination of what are the strongest mediators from hope, flow, and mindfulness, to SWB. It would also be of interest to

investigate whether there are groups of people who are significantly high and significantly low on goal-focused hope, spiritual hope, flow and mindfulness, and if such a groups exist, how this relates to their SWB.

A limitation of this study is that due to the cross-sectional design causality cannot be inferred. A longitudinal design would allow for the temporal relationship between the study variables to be examined, for example, whether types of hope can predict the outcomes of flow- and mindfulness-based interventions. A longitudinal design would also allow for test-retest analysis of the measures to examine whether they are stable over time.

From the current study, the next step we would like to take would be to replicate the study to investigate whether these constructs have the same relationships within a clinical sample. Within Primary Mental Health services it is important that clients have a positive experience and are provided with the most appropriate intervention to prevent their difficulties increasing. Common interventions within PMH services are flow-based (e.g. behaviour activation) and increasingly, mindfulness-based (e.g. MBCT). To better understand these psychological processes within those attending PMH would inform the selection process of approaches and interventions. This study would contribute clinically by identifying whether different types of hope have different relationships with SWB within a clinical sample, which may inform the selection of interventions. For example, if the same relationships were found between goal-focused hope and flow, spiritual hope and mindfulness, and goal-focused hope and mindfulness, this may be used to inform appropriate interventions. This would also have economical implications regarding the cost to services when clients are re-referred and/ or stepped up to more acute services. Presumably, clients being provided with inappropriate interventions contribute to the cost of such clients. Being able to better predict what approach to take (e.g. whether to utilise goal-focused hope or spiritual hope as areas of resilience if they are found to be associated with SWB) and what

interventions may be of benefit (e.g. using assessment of hope to identify whether flow-based or mindfulness-based interventions are most appropriate) would reduce the costs.

What follows is an overview of a possible future study to investigate whether the results of this study are replicable in a clinical sample:

Study Aim: Firstly, to explore the relationships between goal-focused hope, spiritual hope, flow, mindfulness and SWB in a clinical sample. Secondly, to further examine the novel and unexpected findings within this study, (i.e. the relationship between goal-focused hope and mindfulness, and the relationship between flow and mindfulness), with a clinical sample.

Predictions: The predictions and hypotheses are the same as those presented in the empirical paper (chapter 2). Additional predictions would be based upon unexpected findings from this study: that goal-focused hope and mindfulness would be positively associated with each other, and that flow and mindfulness would be positively associated with each other.

Design: The study would be a cross sectional design.

Method

Participants: The participants would be patients attending PMH services within the NHS.

Measures: Study variables will be measured using the same assessment tools as used within this study: The Hope Scale (Snyder et al., 1991), Comprehensive Hope Scale-trait version (Scioli et al., 2011), Dispositional Flow Scale (DFS; Jackson & Marsh, 2006), Five Facet Mindfulness Questionnaire (FFMQBa; er et al., 2008), Satisfaction with Life Scale (SWLS; Diener et al., 1985), and Positive and Negative Affect Scale (PANAS; Watson et al., 1988). Demographic data will be recorded (e.g. age, gender, reason for referral to mental health services).

Procedure: Participants will be recruited from NHS PMH services. Their clinician will provide information on the study and provide the participant with time to ask questions. It will be made clear that whether or not they participate does not affect their access to services. If happy to continue, the participant will then be consented into the study. Once consented into the study, measures will be posted home as a questionnaire to be brought in to the following session. Alternatively, measures could be completed within the session. The process used to complete the measures will be dependent upon the service (i.e. some services will already have measures that they send home to be completed, which the measures of this study could become part of; other services will complete measures in session with their clients and so could complete study measures in the same way, ensuring that doing so would not adversely affect the therapeutic experience). Participants will be recruited across different NHS sites. Prior to data collection, NHS ethical approval will be sought from each trust that the study recruits from.

Analysis: Correlational analysis will be used to study the associations between goal-focused hope, spiritual hope, flow, mindfulness and measures of SWB. Multiple hierarchical regression analysis will be employed to examine whether mindfulness mediates the relationship between spiritual hope and SWB, and whether flow mediates the relationship between goal-focused hope and SWB.

3.6 Thesis Summary

In summary, this study aimed to develop an understanding of the relationships between goal-focused hope, spiritual hope, flow, mindfulness, and SWB. The results demonstrated that goal-focused hope, flow and mindfulness were associated with cognitive and affective indices of SWB, whereas spiritual hope was not. Goal-focused hope had a direct relationship with SWB, whereas, the relationship between spiritual hope and SWB occurred indirectly via mindfulness. Importantly, this study has advanced our understanding on mechanisms from hope to SWB. This has implications for promoting well-being in both clinical and non-clinical settings. To better understanding these psychological processes in promoting SWB, further research is needed.

3.7 References

Asakawa, K . (2010). Flow experience, culture, and well-being: How do autotelic Japanese college students feel, behave, and think in their daily lives? *Journal of Happiness Studies, 11,* 205-223.

Baer, R., Smith, G., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., Walsh, E., Duggan, D., & Williams, J. (2008). Construct validity of the five facet mindfulness questionnaire in meditating and non-meditating samples. *Assessment, 15*(3), 329-342.

Brown, K., & Ryan, R. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84*(4), 822-848.

Carmody, J., & Baer, R. (2007). Relationships between mindfulness practice and levels of mindfulness, medical and psychological symptoms and well-being in a mindfulness-based stress reduction program. *Journal of Behavioural Medicine, 31,* 23-33.

Csikszentmihalyi, M. (1991). *Flow: the psychology of optimal experience.* Harper Perennial: Modern Classics.

Csikszentmihalyi, M., & Nakmura, J. (2010). Effortless attention in everyday life: A systematic phenomenology. In B. Bruya (Ed.), *Effortless attention: A new perspective in the cognitive science of attention and action* (pp. 179-190). Cambridge, MA: The MIT Press.

Diener, E., Emmons, R. A., Larsen, R., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49,* 71-75.

Diener, E., Suh, E. M., Lucas R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125,* 276-302.

Hayes, S. C. (2004). Acceptance and Commitment Therapy and the new behavior therapies: Mindfulness, acceptance and relationship. In S. C. Hayes, V. M. Follette, & M. Linehan (Eds.), *Mindfulness and acceptance: Expanding the cognitive behavioral tradition* (pp. 1-29). New York: Guilford.

Jackson, S., & Marsh, H. (2006). Development and validation of a scale to measure optimal experience: the Flow State Scale. *Journal of Sport & Exercise Psychology, 18,* 17-35.

Kabat-Zinn, J. (1994). *Wherever you go, there you are: Mindfulness mediation in everyday life*. New York: Hyperion.

Oishi, S. (2012). *The psychological wealth of nations: Do happy people make a happy society?* Malden, MA: Wiley-Blackwell.

Scioli, A. (2007). Hope and spirituality in the age of anxiety. In R.J. Estes (Eds.), *Advancing quality of life in a turbulent world* (pp. 135-150). New York: Springer.

Scioli, A., Ricci, M., Nyugen, T., Biller, H. B., & Scioli, E. R. (2011). Hope: Its nature and measurement. *Psychology of Religion and Spirituality, 3*(2), 78-97.

Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry, 13*(4), 249-275.

Snyder, C. R., Harris, C., Anderson, J.R., Holleran, S. A., Irving, L. M., & Sigman, S. T. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*(4), 570-585.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology, 47,* 1063–1070.

Wells, A. (1997). *Cognitive behaviour therapy of Anxiety disorders: A practical manual and conceptual guide*. Wiley-Blackwell.

Appendices

Appendix A

Author guidelines for The Journal of Positive Psychology

General guidelines

- Papers are accepted in English only. American or British English spelling and punctuation is accepted provided that usage is consistent throughout the text. Please use single quotation marks, except where 'a quotation is "within" a quotation'.
- A typical article will not exceed 7,500 words (inclusive of tables/references/figure captions/footnotes/endnotes). Papers that greatly exceed this will be critically reviewed with respect to length. Authors should include a word count with their manuscript.
- Manuscripts should be typed double spaced, with margins of at least one inch. All pages should be numbered.
- Manuscripts should be compiled in the following order: title page; abstract; keywords; main text; acknowledgments; appendixes (as appropriate); references; table(s) with caption(s) (on individual pages); figure caption(s) (as a list).
- Abstracts of no more than 150 words are required for all papers submitted.
- Each paper should have four to ten keywords .
- Search engine optimization (SEO) is a means of making your article more visible to anyone who might be looking for it.
- Section headings should be concise.
- All the authors of a paper should include their full names, affiliations, postal addresses, telephone numbers and email addresses on the cover page of the manuscript. One author should be identified as the corresponding author. The

affiliations of all named co-authors should be the affiliation where the research was conducted. If any of the named co-authors moves affiliation during the peer review process, the new affiliation can be given as a footnote. Please note that no changes to affiliation can be made after the article is accepted.

- For all manuscripts non-discriminatory language is mandatory. Sexist or racist terms should not be used.
- Authors must adhere to SI units . Units are not italicised.
- When using a word which is or is asserted to be a proprietary term or trade mark, authors must use the symbol ® or TM.

Article style – Taylor & Francis Style No. 4

Running heads	*(verso) J. Smith and P. Jones* or *J. Smith* et al. if 3 or more authors. If J.B. Smith then initials are closed up *(recto) Journal Title* centred on pages
Article type (when needed)	**RESEARCH ARTICLE** bold caps, centred
Title	**Bold, first word and proper nouns cap only** centred
Authors	An Author and Another Author (initials closed up if J.B. Smith) centred
Affiliation	*aDepartment, University, City, Country; bDepartment, University, City, Country* centred
Received dates	(*Received 20 July 2011; accepted 17 August 2012*) After affiliation, centred
Abstract	Text smaller, indented both sides centred
Keywords	**Keywords:** word; another word; lower case except names Position aligned with abstract, same size as abstract

Correspondence details	Given as footnote on page 1* *Corresponding author. Email: xxxxxxx ranged left, no indent. Postal address not included in footnote. If there is only one author, use *Email: xxxxxxx
Headings	A. **Bold initial cap only** B. ***Bold italic initial cap only*** C. Italic initial cap only D. *Italic initial cap only.* Text runs on All ranged left, numbers to be included if supplied, no indent below.
Paragraphs	Indented
Tables	(Table 1) in text. Table 1. Title initial cap only. (ranged left above table) Note: This is a note. (ranged left under table)
Figures	(Figure 1) in text. Figure 1. Caption initial cap only. (ranged left under figure) Note: This is a note. (ranged left under figure)
Permissions statement for third-party figure and table captions	If the rightsholder has supplied text for this purpose, use their text. Otherwise, insert the rightsholder's name within the square brackets: © [Rightsholder]. Reproduced by permission of xxx. Permission to reuse must be obtained from the rightsholder.
Displayed quotations	Indented left and right, smaller font (over 40 words, or when appropriate)

Lists	(1) for numbered lists Bullets if wanted
Equations	Equation (1) in text Centred
Acknowledgements	A heading Goes before notes, bio notes and refs Text smaller
Funding	A heading. Goes after Acknowledgements Text smaller Funding agency written out in full. Grant number in square brackets. Multiple grant numbers separated by comma and space. Agencies separated by semi-colon, e.g. This work was supported by the Wellcome Trust [grant number]. This work was supported by the Wellcome Trust [grant number],
Notes	**Notes (A heading)** 1. This is a note. 2. This is another note. Text smaller
Notes on contributors Not all journals require this – please see the relevant instructions for authors page	**Notes on contributors (A heading)** First author details. Line space. Second author details. Goes after Acknowledgements, before refs Text smaller

Appendix	**Appendix 1. Title if given (A heading)** Goes after References Text smaller
Spelling preferences	Please consult the instructions for authors page.
Punctuation	Please consult the instructions for authors page.
Dashes	Spaced en rules for parenthetical dashes Use en rule between spans of numbers (e.g. 20–40), including page numbers in references
Numbers and units	Numbers: spell out one to nine, then 10, 1000, 10,000 10% (except at start of sentence) Units: follow author
Dates	4 October 2005 in the twenty-first century in the 1970s
Reference style	APA 6th Edition

Appendix B

This text box is where the unabridged thesis included the following third party copyrighted material:

Snyder, C. R., Harris, C., Anderson, J.R., Holleran, S. A., Irving, L. M., & Sigman, S. T. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*(4), 570-585.

Appendix C

This text box is where the unabridged thesis included the following third party copyrighted material:

Scioli, A., Ricci, M., Nyugen, T., Biller, H. B., & Scioli, E. R. (2011). Hope: Its nature and measurement. *Psychology of Religion and Spirituality, 3*(2), 78-97.

Appendix D

This text box is where the unabridged thesis included the following third party copyrighted material:

Jackson, S., & Marsh, H. (2006). Development and validation of a scale to measure optimal experience: the Flow State Scale. *Journal of Sport & Exercise Psychology*, *18*, 17-35.

Appendix E

This text box is where the unabridged thesis included the following third party copyrighted material:

Baer, R., Smith, G., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., Walsh, E., Duggan, D., & Williams, J. (2008). Construct validity of the five facet mindfulness questionnaire in meditating and non-meditating samples. *Assessment, 15*(3), 329-342.

Appendix F

This text box is where the unabridged thesis included the following third party copyrighted material:

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology, 47,* 1063–1070.

Appendix G

This text box is where the unabridged thesis included the following third party copyrighted material:

Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. *Psychological Assessment, 5,* 164-172

Appendix H

Overview of ethics process

As the study involved staff and students at the University of Liverpool, ethical approval was needed from the Division of Clinical Psychology's Research Committee and the Institute of Psychology, Health and Society Research Ethics Committee (REC).

In order to gain ethical approval a research proposal was designed detailing relevant literature, research questions and predictions, the study methodology and proposed analyses. A copy of the research proposal was sent to both committees.

The research proposal was reviewed by two readers who fedback to the Division of Clinical Psychology's Research Committee. On the 5th May 2011 a response was received suggesting some minor amendments to the research proposal. These issues were discussed and a response sent to the committee on 5th June 2011 detailing how the issues would be addressed. On 5th September 2011 a letter was received from the Division of Clinical Psychology's Research Committee stating that the Chair had approved the revised research project.

A minor amendment was made to the study regarding changing the data custodian. The Division of Clinical Psychology's Research Committee was informed and a letter was received on 23rd November 2011 stating that the amendment was accepted.

On 5th April 2012 the Institute of Psychology, Health and Society Research Ethics Committee (REC) approved the application for ethical approval.

Appendix I

Participant information sheet

Hope, Mindfulness, Flow and Subjective well-being: An exploration of associations and relationships

You are invited to take part in an online questionnaire study. Please read the following information carefully before deciding if you would like to take part. If you would like more information or have any questions please contact us via the contact details provided below. The following information will explain why the research is being done and what it will involve.

In order to participate we ask that you are over 18.

What is the purpose of the study?

As well as researching the difficulties and problems people can face in life and how to alleviate them, it is important to also understand what makes people happy; what affects whether someone evaluates their life as good or bad. Subjective well-being (SWB) is a broad concept that has been defined as the thoughts and feelings a person has about their life. There is increasing evidence for the importance of SWB in physical and mental health. As such, it is necessary that we understand what affects peoples' SWB and what may enhance it.

Hope has been commonly defined as positive future thinking. The association between hope and SWB has been well documented, with hopeful thinking enhancing SWB. However, what is not known is how hope enhances SWB.

The experience of both mindfulness and flow have been associated with enhanced SWB. Mindfulness has been described as 'paying attention in a particular way, on purpose, in the present moment, non-judgementally'. Flow is the mental state of being in which the

person is fully immersed in the current activity. Hope, mindfulness and flow have all been associated with SWB. The purpose of this study is to build on current literature by looking at the relationships between hope, mindfulness, flow and SWB.

What will happen if I take part?

You will be asked to complete a set of online questionnaires by selecting responses from a list. The questionnaires are about hope, mindfulness, flow and SWB. It is estimated that it will take up to 30 minutes to do this. You will have the opportunity to include your contact details to be entered into a prize draw for high street vouchers. Prizes are £50 high street vouchers for the first winner and ten £10 high street vouchers for the following ten winners.

Confidentiality

Any information you give will be anonymised and will not be personally identifiable. You will be provided with a study participant number should you wish to withdraw from the study at a later date. Your responses will only be viewed by the researchers involved in the study. Any data you provide will be stored in accordance with the data protection for five years and will then be destroyed.

How will the information be used?

The results from the study will be written up as part of a Doctoral Degree in Clinical Psychology. It is expected that the findings will be published in an academic journal and disseminated at conferences at a later date.

Are there any risks to taking part?

There are no direct risks to taking part in the study. However, some of the questions ask about your feelings and beliefs. If any of the questions upset or affect you in any way we advise you to contact your GP, the researchers, student counselling and/or discuss this with someone you trust.

Are there any benefits to taking part?

There will be no immediate direct benefits to you. However it is expected that the research results may benefit people in the future. This study will contribute to clinical practice by exploring mindfulness and flow and their relationships with hope. This will provide clinicians with further understanding of the mechanism in which hope enhances SWB.

Will my taking part be covered by an insurance scheme?

Any participants who take part in the study which is approved by the University's ethics committee will have cover.

What if I am unhappy or there is a problem?

Please contact XXX on XXX and they will try to help. Should you remain unhappy or wish to make a complaint which you feel cannot be made directly to us then please contact the Research Governance Officer for the University on XXX providing details of the name or description of the study, the researcher involved and the details of the complaint you wish to make.

Who can I contact if I have further questions?

XXXXXX

Consenting into the study

You will consent to taking part in the study by ticking boxes on the following page which state that you have read the information sheet, understand you can withdraw from the study at any time and consent to take part.

If you would like to be entered into a prize lottery as a thank you for taking part, please enter your email address or contact telephone number when requested to do so.

Appendix J

Participant consent form

	Please insert 'x' into the box if you agree
1. I confirm that I have read and have understood the information sheet provided for the above study.	☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my rights being affected.	☐
3. I understand that, under the Data Protection Act, I can at any time ask for access to the information I provide and I can also request the destruction of that information if I wish.	☐
4. I agree to take part in the above study.	☐

Appendix K

Data screening

Of the 98 participants who provided full data-sets, there was no missing data. Histograms and frequency charts were checked for outliers and none were found. Data reduction and the extent to which items in measures reflected underlying constructs was achieved using the instructions given by the authors of each measure. Skewness was determined on the basis of the standard criterion of whether the *z*-score were more than 2.58 (Field, 2005). Skewed variables (goal-focused hope, spiritual hope, and negative affect) were transformed using the commonly used transformation LG10 (1 + variable value). Kurtosis was determined using the same criteria (*z*-score greater than 2.58). Following log transformation the scores for goal focused hope, spiritual hope, and negative affect were normally distributed (all *z*s < 2.58) and parametric analyses were conducted.

Cohen (1988) recommended that in the behavioural sciences researchers should recruit numbers sufficient to detect .80 power at an alpha of .05. Using these parameters a G-Power (Faul et al., 2007) analysis was conducted to detect a medium effect for correlation and hierarchical regression analyses. The power analyses calculations suggested at least 82 participants were needed to have adequate statistical power for correlation analyses and at least 92 participants were needed for hierarchical regression analyses with five predictors. The final sample size was 98, so slightly larger than the power calculations indicated was necessary.

Appendix L

Hierarchical multiple regression analyses predicting PA, NA and SWLS from GFH and mindfulness

	Predictor variables	Standardised Coefficient β			Confidence Interval						Model Summary ΔR^2		
		PA	NA	SWLS	PA		NA		SWLS		PA	NA	SWLS
					L	U	L	U	L	U			
Step 1	Age	-.05	-.01	-.08	-.17	.11	-.01	.01	-.16	.08	.03	.05	.04
	Gender	-.12	**.20***	.04	-5.51	1.47	.01	.14	-2.42	3.58			
	Staff/ student	.09	-.09	.15	-2.36	5.29	-.11	.04	-1.10	5.46			
Step 2	Age	.03	-.07	-.01	-.08	.12	-.01	.01	-.10	.09	**.50****	**.31****	**.43****
	Gender	-.06	.15	.10	-3.49	1.57	-.01	.11	-.92	3.74			
	Staff/ student	-.01	-.03	.07	-2.83	2.72	-.07	.05	-1.58	3.54			
	GFH	**.70****	**-.53****	**.64****	15.36	23.63	-.38	-.19	11.52	19.15			
Step 3	Age	.01	-.03	-.03	-.10	.10	-.01	.01	-.10	.09	**.52***	**.36***	.44
	Gender	-.03	.11	.11	-3.06	2.00	-.02	.10	-.73	4.00			
	Staff/ student	-.01	-.05	.08	-2.55	2.94	-.08	.05	-1.46	3.68			
	GFH	**.57****	**-.33***	**.56****	10.39	21. 35	-.30	-.05	8.33	18.57			
	Mindfulness	**.20**	**-.30***	.12	-.01	.14	-.01	-.01	-.03	.10			

Note. GFH = Goal Focused Hope, PA = Positive Affect, NA = Negative Affect, SWLS = Satisfaction With Life Scale; U = upper, L = lower

* p <.05, ** p < .001.